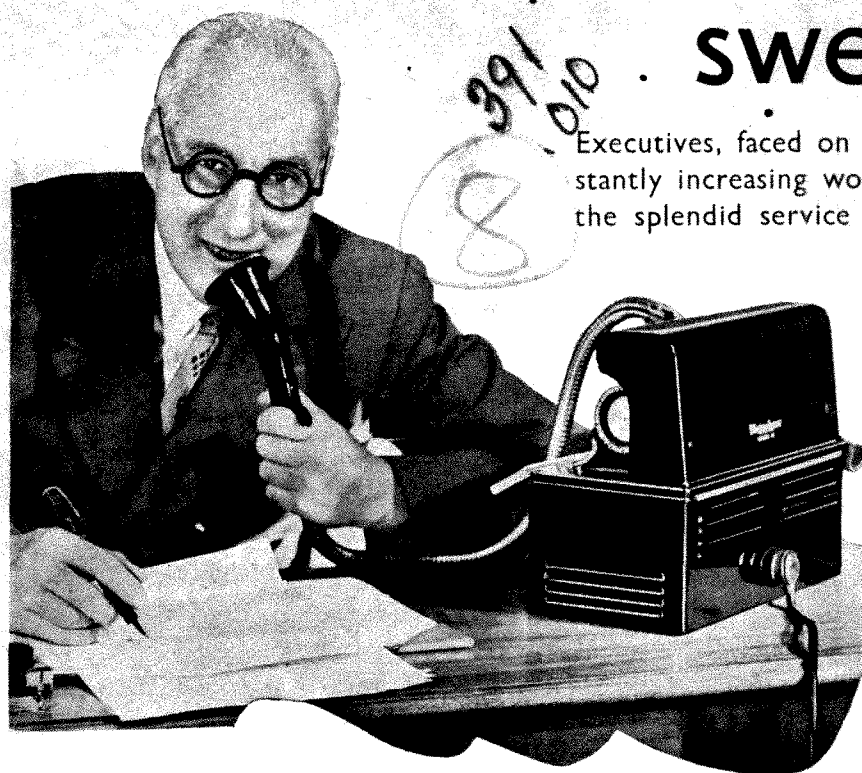


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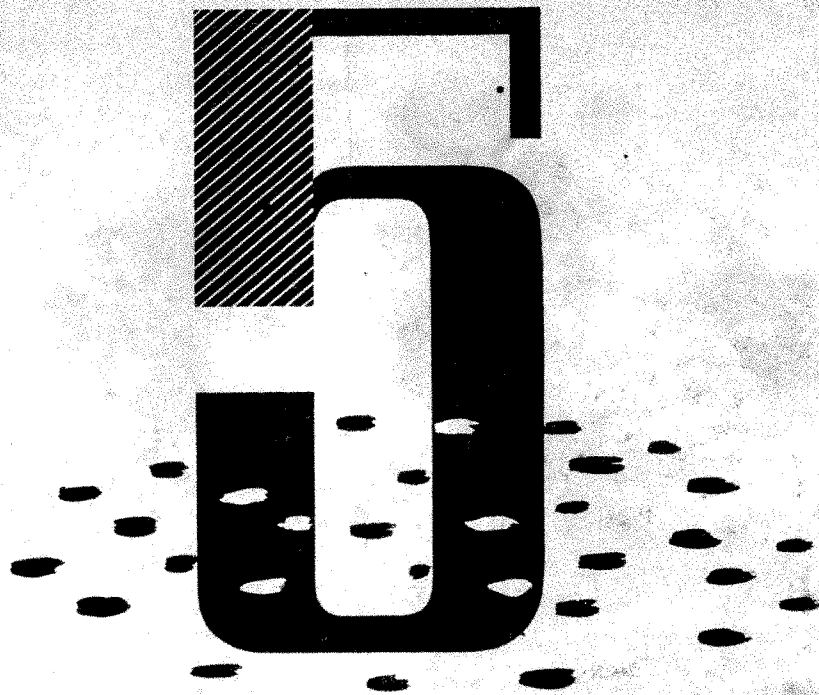
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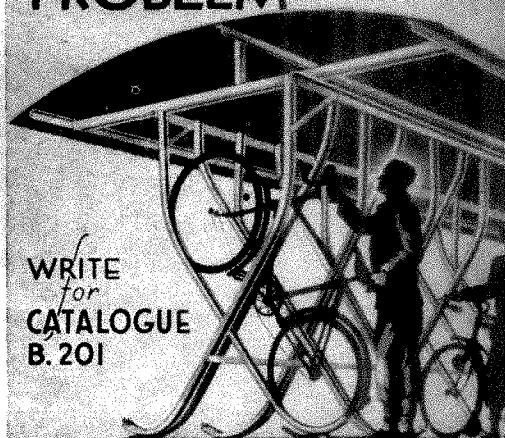
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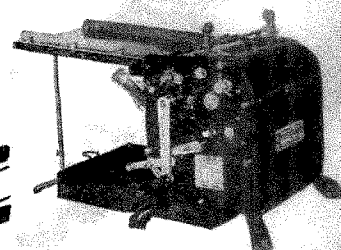
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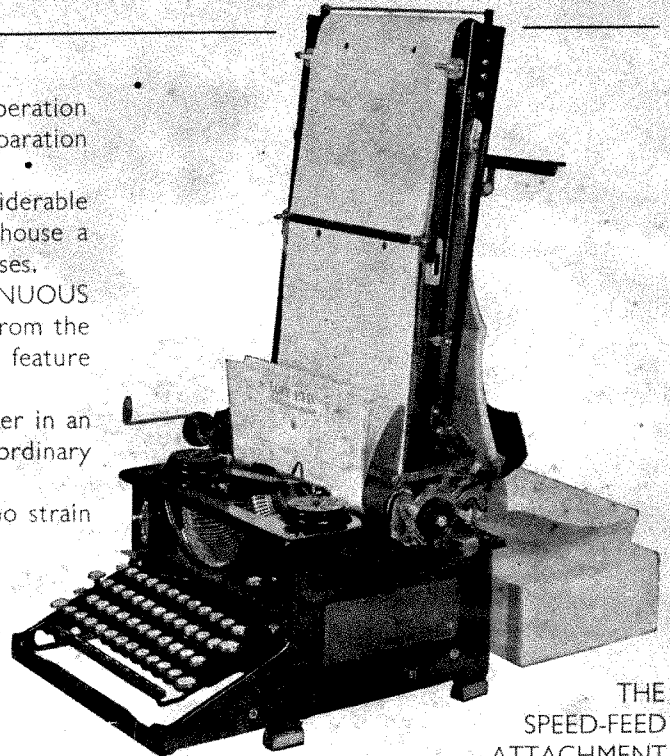
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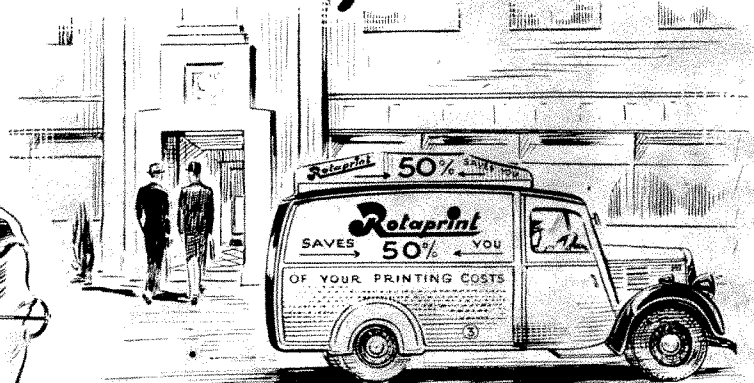
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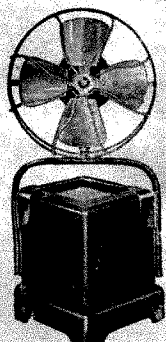
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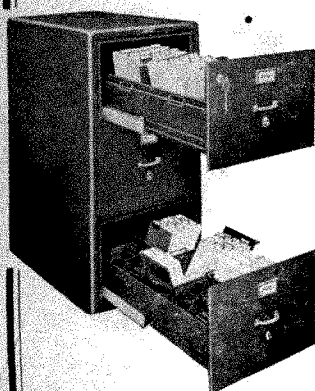
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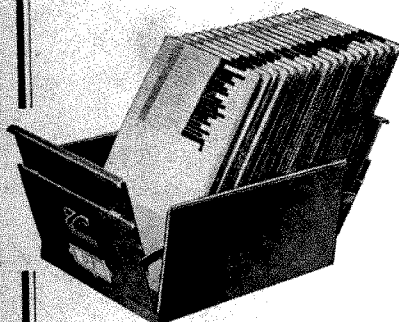
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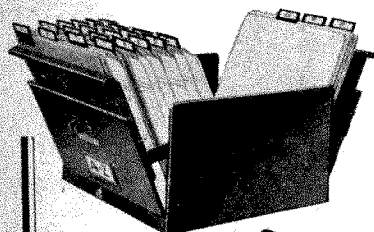
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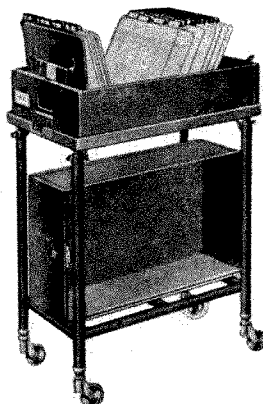
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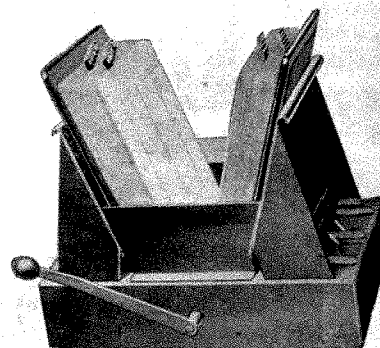
The "Maybe" High Speed Posting Tray. Adjustable ends securely clamp 100 cards or give generous posting Vee when fully loaded. Simple. Light. Portable.



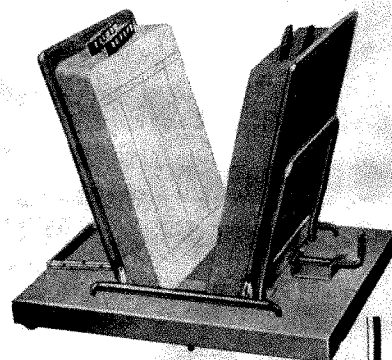
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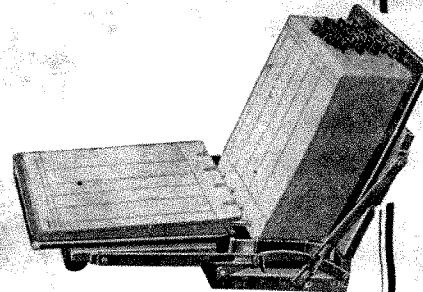
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BRANCHES AND SERVICE THROUGHOUT THE PROVINCES

October waiting

Industry In 1939 Calls, Not for 'Defence,' but a *12 Months' Policy Of 'Attack'*

AGGRESSION wins business as it wins wars. And at no time is a policy of aggression more vitally necessary than during times when conditions are difficult.

Conditions are difficult now, paradoxical as that may seem with a government embarked on the biggest spending campaign in history.

Business aggression therefore is imperative as a policy for this new year. But it must be a policy of well-planned attack, each action and move must be correlated in a campaign aimed at a specific objective.

This object must be: increased turnover and profits and simultaneously rigid control of all-round expense.

Anything less must be counted a defensive measure, an acknowledgment that no progress can be planned.

If your firm is one which has had to fight the doldrums during 1938 you may tend to plan for 1939 along defensive lines. That is not good enough, nor do conditions really justify that policy. Your budget should aim at least at a 10 per cent increase in turnover.

If you operate in industries that have not been affected by market deterioration then a good deal bigger increase may be planned.

We are not, however, discussing figures here. That is obviously impossible with all the different circumstances

that surround every individual firm. But we do urge: plan for *progress*, and not merely for "holding on."

Employ Cost - Reduction Rather than Price-Raising

Unfortunately, adverse factors stick more firmly in the minds of business men than do favourable factors. That there have been—and still are—adverse factors to be considered there is no doubt. Let us, therefore, take a look at some of them. The chief ones for the average manufacturer fall under these heads: (1) Increased sales resistance, lower sales; (2) increased production costs; (3) increased overheads; (4) less selling effort by representatives and retailers.

A check to rising sales was noticed about a year ago, following a general rise in retail prices. The public did not

Penny-wise policy is pound-foolishness to-day. The year opens with prospects equal to the peak level of 1938. Business men who successfully exploit them will be those who plan boldly and spend freely on **CONSTRUCTIVE** ideas and equipment while rigidly controlling all **UNPRODUCTIVE** expense

By **THE EDITOR**

respond. As far back as October 1937 when price rises were starting **BUSINESS** pointed out public hostility to the policy and emphasized the need to *cut costs* rather than to put up selling prices.

Commenting on the slump in car sales, for example, we said: "Hostility to price rises may be the key to this setback" (**BUSINESS**, February 1937). Later we again pointed out: "Among most effective tactics (to raise sales) now are price *reductions*, which justify views expressed here that the public resent



the price rises" (BUSINESS, May 1937).

Conditions now ruling call even more insistently for getting down the retail selling prices. In some cases of course the policy is difficult to put into effect. Lower sales volume in the past six months or so has not only tended to drive up production costs, but higher wages, increased transport costs, higher overheads, etc., have also eaten into the profit margin.

External conditions, too, have made management's task more difficult. The frequent crises and states of tension are all against business confidence. The public, from resenting price increases and, therefore, being unwilling to spend freely, have become fearful of actual war. Manufacturers refuse to commit themselves to the expense of long-range plans since such plans, they believe, might never materialize, owing to the intervention of some new crisis. Retailers have felt the deadening effect of this anxiety and have, too, held back orders. They have been less forceful in selling, less ready to co-operate with manufacturers.

Travellers, in turn, have become discouraged by the difficulties in filling order books. They have lost enthusiasm. Vigour and drive in selling have been dampened down.

All these factors tend to aggravate the internal problems of production costs and overheads. These charges have been pushed up in many firms until the state is near where the company is working without profit. And, to make matters worse, a great many concerns have been expanding for three years in succession. They have, therefore, the problem of trying to keep up, in deteriorated conditions, organizations built on the previous boom period.

It is fortunately true that these problems are not insoluble for resource-

ful and vigorous management. The fundamental policy is to plan attack.

There are many favourable factors to justify this policy. What are they?

There is hope of getting at least a 10 per cent increase in sales because of these six conditions which exist to-day: (1) Retailers' shelves are low in stock, which provides a chance for forceful selling; (2) Wages are up, the national income standing at £5,750,000,000, which compares with 1929, the previous best at £4,961,000,000; (3) The cost of living is about 4 points down as compared with the level of a year ago, 156 as against 160; (4) Building activity is being maintained, re-housing, factory and public construction taking up the slack left by the slow-down of private building; (5) Rearmament is getting into full swing and will reach a peak level this year; (6) The general trend of trade has been upward during the past six weeks or so.

How is management to take advantage of these favourable factors? First by keeping down selling prices. As we have said time and again this must be a cardinal point of policy. Many firms, for instance, who have ignored the public demand in this respect have found themselves forced to sell accumulated goods at knock-down prices.

A year ago there was still a trend towards higher-priced, better quality products. There is less evidence of this to-day. Luxury goods are likely to find a contracting market for some time to come. Demand is for standard quality goods at price levels established by branded lines.

The second way to increase sales is by intelligent market research. For example, a successful plan is to study market density around centres with 50,000 population. This "three-dimensional" plan considers three major factors: population of the city or town and

of the area within, say, 25 miles; class of buyers and analysis of their purchasing power; trend of population, buying power, etc., up or down.

Analysed in this manner, the cost of selling in each area can be established. Area proportion of advertising, sales literature, sales schemes, selling effort, etc., of the national total can be known and budgeted.

A scheme like this, as well as usual types of market research, can be worked out at little cost of time and labour with the aid of such a publication as *The Marketing Survey of the United Kingdom* (see page 44).

If management planned its selling along these lines uneconomical costs could be cut out and sales campaigns would be increased in intensity and efficiency.

If the drive for sales is successful it will offset some of the problems surrounding production and overheads.

What to do to Cut Production Costs

What can be done to cut production costs? Certain obvious moves stand out. A check-up on the efficiency of plant, for instance, is always worth while. Obsolete and obsolescent machines should be weighed against the output and working advantages of newer types. Floor lay-out, routing, handling and so on should be gone over for possible time- and labour-saving improvements. Executives should examine what processes can be broken down or simplified so that they can be done by cheaper grades of labour.

Alternative and cheaper materials can be sought and used—where they do not affect the quality of the product.

Sources of wastage, breakage, etc., should be ruthlessly tracked down. Co-operation of the whole staff should be enlisted in economy of this kind.

Methods of stores and stock control should be looked into. Many firms, by instituting the most modern methods here, have been able to set free a good deal of capital and avoid any future danger of locking up much-needed money in material beyond requirements.

And do not overlook the possible economies that a properly qualified outside consultant might be able to make. A fresh mind, free from bias or prejudice, has many times introduced widespread economies and improvements, even in firms that were considered to be already well organized.

Executives in businesses should free their minds from any idea that it discredits them, or reflects adversely upon their ability, to call in the consultant. Some of the biggest and most progressive firms in the country to-day regularly make use of the outside specialist. This is one reason why some of these big firms have been able to reach the positions they enjoy to-day. They make use of every possible "tool of management," and the qualified consultant is undoubtedly one of the most effective because he is without that fatal handicap—prejudice.

F. T. POULTON.

These Points Are All In Favour . . .

1. **Retailers' shelves are low in stock: this provides the opportunity for intelligent and forceful selling**
2. **Wages are up: the National income stands at £5,750,000,000. This is better than the £4,961,000,000 which is the previous best, touched in 1929**
3. **Cost of Living is 4 points down: standing at 156 as against 160 a year ago**
4. **Building activity keeps up: rehousing, factory and public construction taking up the slack left by the slow-down of private building**
5. **Rearmament is getting into its full stride: will probably touch its peak level this year**
6. **Above all, the GENERAL trend of business is upward. It has in fact headed this way for six weeks or more . . . and the momentum shows signs of steadily increasing**

Here's the Kind of Broad-Scale Planning that is Revitalizing Business To-day

Reorganization of Production Management

at PATON, CALVERT & CO., Ltd.

These Conditions Existed

- IN THE WORKS: (1) Competition for supplies from the productive service departments.
- (2) Uneconomic production.
- (3) Misunderstandings of instructions, which were mostly verbal.
- (4) Waste of materials.
- (5) Expenses incurred through emergency arrangements.
- (6) Components not co-ordinated.
- (7) No stores control—stocks piled up unnecessarily.
- (8) No check on overhead expenses.

ESTIMATING: Poor co-ordination between estimating and works practice.

COSTING: (1) Cost office unable to carry out its true function, it working merely as a statistical records office.

- (2) Poor co-operation between works, estimating, and costing.

These Improvements Made

1. KNOWING, NOT GUESSING. (a) Works manager knows every order has been planned to meet delivery needs or, if not, why.
- (b) He knows of abnormal happenings and costs before it is too late.
- (c) Sales dept. know the works load; orders can be arranged accordingly.
2. Customers' inquiries answered promptly; deliveries speeded-up in one section by 25 per cent, in another 33½ per cent, all overdue orders automatically indicated.
3. Foremen have more time to concentrate on smooth working, plant maintenance, work improvement, waste elimination.
4. Reduction of idle machine time.
5. All executives freed from routine.
6. Plant lay-out more flexible, seasonal rushes more easily handled. Output increased 11 to 33½ per cent.
7. Overstocking much reduced.

THESE works cover about 6 acres. The Company's products are polishes, metal toys and hardware, tin and composite boxes, and cover no fewer than five trades. In the first three sections there are approximately 100 lines with an average of four varieties each, and in addition the number of different kinds of boxes and components amounts to nearly 2,000. The average number of operations for metal goods is 8 to 12.

The factory was erected on its present site at the beginning of the century, and has been added to from time to time as business has expanded. As a result, the layout of the factory is far from ideal, and although much has been done from time to time to arrange that there is the minimum of movement of production from shop to shop, alterations had to take the form of expedients, whereas actually to obtain the best results, complete rebuilding was really necessary.

An example of this is as follows. The Company's original products were polishes, the containers being purchased from outside sources. Attention

was then given to the production of our own containers, following which came the introduction of the composite container, i.e., a container comprising a cardboard body with metal ends in respect of which the Company held the original patent. The Great War then intervened and the factory was taken over by the Government. After the War the container business, which had been interrupted, was resumed and, owing to marketing developments and changes of fashion, grew enormously. Other lines akin to the container business were subsequently added at different times, e.g., hardware and cheap metal toys, but all depend at some point or other on one or two common processes, viz., tin-printing or tin-stampings. These sections may be referred to as productive service departments.

Production is Divided into Two Sections

A further complication is that production can be divided into two sections, namely, stock line and made-

to-order goods. Female labour is employed in the factory, with the exception of the tin-printing section and the general services. The Bedaux System of wages payment is in operation. It is impossible to keep one operative on one job all the time.

From what has been said it will be seen that the key to production lies in two departments, viz., tin-printing and tin-stampings, which are called upon to supply bulk material for working up into the final product of each trade.

Before reorganization no real planning had been attempted. The only thing that was done was the obvious, namely, a rough seasonal estimate of sales requirements was prepared in so far as it affected metal stocks and tin-printing. Having done that, and the necessary orders having been placed on the metal suppliers and the printing department, the making-up of the orders into finished products was left chiefly in the hands of the foremen who, in conjunction with the works manager, estimated the probable

(Continued on page 36)



Other Firms find these Plans Cut Costs

Spotlights the High Cost of Errors

TO dramatize the high cost of mistakes, a manufacturing company has slips printed with the heading, in bold type: **Please Be Careful: Errors Cost Money.**

Any bad error during the week is duplicated on to the slips and one slip is enclosed in each pay envelope, as:

"Through carelessness in packing a . . . was damaged in transit to the customer. Replacement, plus time occupied in extra correspondence, telephoning, etc., cost the company 35s."

Through the natural desire of most decent employees to avoid wasteful methods and the moral objection to being "shown up," this method, says the company, has definitely reduced mistakes.

Promotion Plan Stimulates Morale

IN a famous manufacturing concern that sells its branded products in almost every country in the world, each employee has a card in a "visible" file at head office. On the card is listed every qualification the individual possesses, together with his hobbies and private interests.

This is done to assist promotions. Whenever an executive wants to make an appointment in his department he comes first to the personnel manager and states just the kind of person needed.

Qualifications are marked by visible coloured signals, the personnel manager can then quickly see from the file who can be promoted into the job. If an exact fit does not exist in the file someone is found who comes nearest in qualifications.

The policy is "promote from within."

OVERTIME CHARGE APPROVAL	
Name _____	Dept. _____
Reason for Overtime _____	
Hours _____	Rate _____
Charge to Dept. _____	
Sanctioned By _____	

Cut Overtime Costs

During the winter months many firms find a tendency for clerical overtime to increase. Generally the increase is gradual and is not realized until somebody happens to spot the high aggregate of this charge. One firm instituted the requisition shown above and secured an immediate decrease in overtime

New people are taken on only in the lowest ranks, except, of course, on those occasions when very special needs cannot possibly be met by staff talent.

This promotion plan has a strong moral effect and keeps everybody "on his toes," for with nearly 4,000 employees there are frequent chances for "moving up."

Salesmen Get Help But Also Full Credit

DISCUSSING sales management, the managing director of a nationally-known company said to us recently: "One big reason why our salesmen work so successfully is because of our policy of judging each man on the total sales we get through him and not only on sales he makes *completely on his own*. It is total volume that matters, not how many orders the man himself has closed.

We encourage our men to seek help from those higher up, even to getting a top-sales executive to clinch an

order. We do not regard an appeal for help as a sign of weakness; usually the reverse is true. And we get orders we might otherwise miss if salesmen dare not ask superiors for practical help.

This co-operative policy (*esprit de corps* in pukka circles!) does not rob salesmen of cash or credit. The directors and executives make a strong point of this. The men are schooled to appreciate what it means.

Some executives may think this system encourages salesmen to lean too heavily on their superiors. In the case we quote the result is the direct opposite. The men feel they have actual concrete support from the management, and that gives them more confidence in tackling all problems. It certainly seems to encourage them to go after the difficult accounts.

Customers Select Themselves For Mail 'Shots'

THERE are many ways of getting local lists of prospective customers, apart from searching the telephone book, getting voters' lists or using directories. A good method is that used by one provincial store, which recently asked people to bid on a 6-foot refrigerator to be sold to the highest bidder at the end of a week. Some hundreds of persons made an offer, thus providing the firm with a first-class list of prospective users of refrigerators, as, naturally, everyone who bid had some interest in buying.

Subsequent follow-up efforts have been rewarded with a gratifying percentage of sales.

This is an idea that can be developed for many different lines.

Obviously, this sort of idea is not altogether suitable for general lines, but for specialities in the higher price grades it is very useful indeed.

Would These New Products Help in Your Business?

A NEW WAX now available should be of interest to many manufacturers. Unlike most waxes, this new product is not slippery, with poor adhesive properties. It is "sticky" (like rubber) and is powerfully adhesive, even on the smoothest surfaces, such as metal and glass.

It is amorphous and so has higher water-repellent properties than paraffin and other crystalline waxes. It blends easily with resins, oils and other waxes.

One very wide application of this product (known as *Flexo Wax C*) is for the hand-grips of tools, golf-clubs and every kind of thing on which it is necessary to get a firm grip with the hand.

INTENSIVE demand by air-lines, railways, hotels, steamships, etc., for more and more fire-proofing has produced a **NEW FIRE-PROOFING LIQUID.**

This watery fluid is odourless, colourless and harmless to fabrics. It is being successfully used to "proof" paper, leather, all kinds of textile fabrics, feathers and display material.

It can be applied by spraying, dipping or brushing. It does not crystallize and rub off, but forms a transparent film, and, in the case of textiles, furniture stuffing, etc., prevents sagging and lumping. The fluid is called *Ignex*, and is approved by a well-known fire-protection authority.

Address of this and the preceding product from the Editor.

DRAUGHTSMEN know well that **PENCILS** are faster, cleaner and easier to work with than pens and drawing ink.

Few pencils, however, meet the exacting need of tracings which are to be used for blue-print work, because their lines are not dense enough.

The new *Castell* pencils, by F. W. Faber, are specially made to produce lines of extreme opacity. They yield tracings as effective as ink for blue-printing.

They are as effective as ink, too, for any other kinds of drawings, whether needed for reproduction (for printers' blocks, etc.) or not.

These pencils are made in grades from 7B to 9H and, incidentally, they have recently been reduced in price from sixpence to fourpence each.

Business Methods Could Marshal Man-Power Overnight We Might Lose a War by Officialdom's Plan

SINCE publication of my last article, in the December issue of *BUSINESS*, certain additional facts about the Government's proposed National Register have been made known.

As a business man I do not think Sir John Anderson's scheme for organizing the nation's industrial power goes far enough, nor, in my submission, is it framed as simply as it could be.

Two Very Weak Points

For example, he announces a *Voluntary* Register for immediate use to be followed by a compulsory Register only in case of war. He says: "The vital difference between pre-war requirements and war requirements is that in war it is essential to survey and marshal our resources as a whole; for this purpose the registration only of volunteers would not be sufficient, and it would be necessary to compile a universal Register. To be effective, however, such a Register must be up-to-date—and this condition can be satisfied only if it is compiled at the time when the occasion for its use arises" (my italics).

Further, he goes on to say that, in order to prepare the groundwork for a complete Register, the machinery of the ordinary census will be used.

Taking the first point, everyone will

GRAHAM CUNNINGHAM, Managing Director, 'Triplex' Safety Glass Co., Ltd., Maintains that . . .

Sir John Anderson's National Register of Industrial Personnel and Resources, vital factor in Britain's defence plan, is cumbersome and dangerously slow-moving. If real emergency arose an admitted lag would precede its effective working. During that lag anything might happen.

In this, his second article on the subject, Mr. Cunningham condemns the voluntary system as 'toying' with the idea, advocates a compulsory plan NOW, and puts forward a standardized business system of Registration that would be simple, elastic, fast and ready at any moment of emergency

agree that, to be any use, the Register must be up-to-date. I do not, however, agree that only by waiting for war to descend upon us could an up-to-date Register be compiled.

Business men in progressive firms throughout the country have registers, registers of tens of thousands of customers, hire-purchase accounts, mailing campaigns, stocks, purchases, and so on. These are kept absolutely up-to-date. What sort of a business man would he be who waited till the moment the information was urgently needed

pose is tabulation, vast tabulations bringing national data to one centralized point.

The very essence of a Register of Industrial Man-power, however, is *DE*-centralization.

If the authorities were to obtain every single fact about every man and woman and every factory in the land, it would be no earthly use having such facts at a central point, say, in London. And anyway, to *tabulate* such facts by means of the machines used for the census would not only be superfluous, it would simply make those facts unusable.

If war comes, every area of Britain will be affected differently; but every area will have to take its action simultaneously. It is, therefore, the Local Authority in each area that must have the Register of persons and plant under its control.

True, Local Authorities may be under the control of a central point, say, London headquarters, inasmuch as they would receive from this point the command for action, the details of what action to take and what use to make of their results; but the *data* on which to act must, I contend, be accumulated and retained by the Local Authority responsible for each area.

Standardization, Not Chaos

It is not within my province to define the boundaries of these areas, I am simply advocating the principle.

I suggest that the areas be fixed and that the appointed Authority in each area be provided with a standardized

A complete control of our skilled men must be ready for instant operation. No voluntary plan can possibly secure this

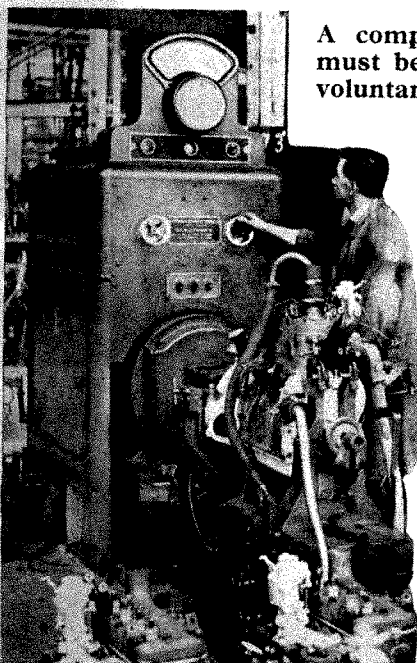
before he undertook to compile a register of data?

No, by using the simple business systems available to-day, a register can be compiled to cover five, ten, or a hundred different facts concerning thousands or millions of people, and, with very little trouble, it can be kept so that at any moment in one or twenty years it is absolutely up-to-date.

It is my opinion that Sir John's allegation that a National Register, if properly compiled to-day, would be obsolete if war did not come for, say, two years, is quite unfounded.

His statement about the use of the census machinery I cannot at all reconcile with the obvious needs of the moment.

The type of equipment employed on the census, of course, may be appropriate for that purpose; but that pur-



system for working the Register, the simple, effective kind of system that progressive businesses use every day.

As broad classifications the Register could cover (a) Personnel that should be recruited to the active services, (b) to A.R.P., (c) to be drafted to special civilian work, (d) kept at their normal work. It could also cover every kind of plant and transport. But here again the actual detail must be left to Sir John Anderson's department; he has behind him all the ways and means that are at a Government's command for amplifying these details.

This Gap Could be Fatal

This toying with the idea of a Voluntary Register is, I think, futile. Sir John Anderson claims that with a voluntary scheme, assisted by his census "machinery," such effective ground-work could be prepared that, in the event of war, only three weeks would be necessary to get the Register on to an all-embracing compulsory basis. Moreover, he had previously said that only a compulsory scheme would meet the nation's need in war.

So we get an admitted three-weeks' lapse, after an outbreak of war, before the plan would be fully effective.

Supposing the lapse were of three weeks only—and, personally, I think it would be nearer three months, but assume the three weeks—what state should we be in at the end of that time? Does the Minister understand what an onslaught of modern war between major powers would mean?

Before last September's crisis threw a real scare into everybody the nation was given to understand it was prepared. The propaganda build-up that surrounded A.R.P. suggested a pretty secure position. A few hours were sufficient to prove the whole thing little short of a gigantic hoax.

There is not the slightest reason why we should again be caught like that. Since Munich there has been ample time to get this National Register business on a sound footing. Sufficient has not been accomplished yet; but there is, fortunately, *still* time.

The need is vitally urgent. As I write, there is a revolt in the House

against the Government's laxity in the defence plan; and the inadequacy of the present National Register of industry and industrial man-power is specially cited.

On all sides we hear talk of agreement with a compulsory Register *now*. The country is ready for it. Why does not the Government act in accordance with the country's desire? It is a National Register that is wanted, not necessarily National Service, which is quite another matter.

In war the proper employment of Britain's skilled men will be one of the keynotes of the situation. We must absolutely prevent our specialists, technicians, and skilled workers being thrown away on jobs in the front line. Their patriotism will carry them there unless an up-to-the-minute, all-embracing Register enables the authorities to put such men where they should be *the very moment an emergency arises*. A three-weeks' lapse, leaving the men in doubt, would lose thousands of them.

Last September hundreds of business men asked themselves: "Shall I join the colours or A.R.P.? Will my factory be wanted for war work? Shall I encourage my staff to enlist or persuade them to stay at work? What special work can I do?" Nobody knew, and there was nobody to supply the answers.

The old chaos of 1914 would have been repeated in 1938, and with increased calamity owing to the tragic fact, now generally recognized, that the Government thought its Services were organized, and found they were not.

A fool, if he knows himself to be a fool, is not a very dangerous man. But if he thinks he is clever, then he is a menace and needs to be watched.

Bearing these considerations in mind, therefore, let us have this National Register (a) on a compulsory basis; (b) let it be of the simple, effective, flexible type used in the most successful businesses to-day.

Each Local Authority would know of every man and woman: age, type of work engaged upon, type of other work which *could* be engaged upon, other special abilities (such as knowledge of nursing, A.R.P. training, skilled hob-

bies such as photography), hours of availability, and so on.

The great thing is that these particulars—and any others required—would in a modern business system be on records that are instantly usable. There would not be involved any hunting through mountains of lists, there would be no wasteful duplication of entries, there would be no confusion through factories or men or women being called upon simultaneously by different officials to do different jobs at the same time. The authorities in control could unerringly marshal what forces they wanted when and where they were needed.

Under this system every man and woman could be put to his or her most valuable work. The doctors, scientists, and professional specialists would be kept at their specialized work. The industrial technicians and skilled men would be kept at theirs. The semi-skilled and others of any or no particular qualification would similarly be put to best effect.

There would be no industrial chemists, skilled welders, metallurgists, tool-setters, and so on doing pack-mule work at the dock-sides or munition dumps. Likewise there would be no unskilled labourers pressed into working delicate machine tools at profiteers' wages.

All this marshalling of forces could be done—not in three weeks or three months—but *within a few hours* of an emergency arising. The Local Authority in each area of the country would be in the same state of preparedness, would apply the same standardized system. The machine would function as a smooth-working whole, or as separate but harmoniously geared components, whichever was needed.

Business Men Would Help

Put into effect now, properly controlled under standardized instructions, the Register would not become out of date if war is deferred for months or years. Business executives do not let their "register" of customers' details become out of date as the months and years go on. A National Register, as I advocate it, would simply be a much enlarged record on exactly the same basis, capable of the same flexibility and just as easily kept up-to-date.

Business men, if given the opportunity, would place at the Government's disposal their full services in the way of advice, explanation, and assistance towards installing such a Register.

A voluntary Register could never be kept up-to-date. A person volunteers once and gives the information required, and in twelve months' time he is not going to volunteer again; but with the compulsory system, it is possible to keep records up-to-date, because without any great effort a change of personnel can, as a matter of routine imposed on all of us, be notified to our Local Authorities. A compulsory Register imposes no hardship. It should not be nearly as difficult to fill up a compulsory National Register form as compiling our annual income-tax returns, and what is all important: **the country is ready for a Compulsory Register NOW.**

Now, Catalogues by Air... for 1^{1D}.

HOW it is now possible for British firms to distribute their catalogues throughout the Empire, by air mail, for three-halfpenny postage, has just been demonstrated by Harrods, Ltd., famous London store.

After many experiments Harrods produced a general Christmas catalogue—64 pages—which, with its envelope, weighed less than half an ounce. This was circulated throughout the Empire in time for Christmas gift buying.

This idea was the outcome of Imperial Airways' recent appeal to business firms to use lighter paper so

that more mails per plane could be carried.

Harrods state that there was some doubt at first as to how the many half-tone illustrations would reproduce on the extraordinarily light paper chosen for the catalogue. Results, however, were first class and established this type of catalogue as a most practicable new medium for low-cost Empire distribution by air mail.

Hundreds of British firms could benefit in this way by producing their sales promotion matter to come within the 1 oz. air mail 1^{1D}. postage rates.

Ideas + Application = New Business

In This Case It Was Flowers

EVERY time your secretary adds a woman's touch to your office with a bowl of anemones she contributes, unconsciously, to the success of an executive in the Cornish flower industry. It was his alert mind and his foresight that doubled the Cornwall cut-flower season from three to six months and put a new national seller in the hands of over 1,000 flower growers.

Some years ago this man was traveling in southern France and saw the giant anemones that grew in abundance even in winter months. Thousands of business men had seen the same sight year after year. But they merely saw flowers. This executive saw more than beautiful blooms. His mind grasped the possibilities that opened up if these anemones could be grown in England. They were beautiful, they lasted, they were popular.

He took home some seed and experimented. As he anticipated, the flowers grew profusely in the warm soil and mild climate of Cornwall. And a new line was added to the growers' products. Soon it had passed from side-line status to that of a record seller.

In the past few years the area under anemone cultivation has increased more than eight times and is still going up. Last month in one night over 600,000 blooms were sent to Covent Garden. Tens of thousands more were sent elsewhere. The increase in trade this year as compared with last is around 40 per cent.

It's big business now—just because one executive kept his mind as well as his eyes open on a casual journey.

Shop by Air: Why Not?

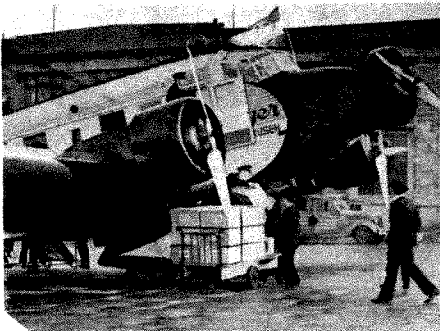
NEW idea of an air shopping-service is being run by an enterprising young lady in New York. From Mildred Johnson a customer can order specialties from cities a thousand or more miles distant and get delivery next morning.

The order is placed direct with "Air Shopping," New York, or at the airline's office in the customer's home town, whence it is teletyped to Miss Johnson.

She knows where to buy everything, and arranges the article's delivery with a special tag attached giving the "log" of the journey as a souvenir.

The plan is not expensive: Choice roses flown from California to New York cost only five shillings more than those grown locally; or native fruits of the Pacific coast costing, say, a pound in Los Angeles are flown right across the continent and delivered in New York within a few hours of picking for only seven-and-six extra.

Air-shopping is possible practically



American shoppers now order goods from cities a thousand or more miles distant—and get delivery next morning. Expensive? Well, five shillings for, say, roses flown from California to New York does not seem excessive, does it?

anywhere now. It simply needs someone who really knows where to buy what, and how to organize details of the service.

'Short Cut to Culture' Is Boosting Book Sales

"SONG-PLUGGING" over the radio has incurred severe condemnation as a form of music-advertising. But now comes what almost amounts to "book-plugging."

The radio has not yet been used, but in the United States they have started a method of "oral reviews" that might well be the thin end of the wedge.

Young women are engaged to read aloud reviews of books to selected audiences. Book-clubs, societies, charitable organizations, and so on (good potential book-buyers) are sponsoring the plan and charge a small admission fee to raise their own funds.

Dozens of cities in various parts of the States have taken up this short cut to culture, and so popular is it that in one well known centre more than 1,000 people struggled for places in a hall that had only 400 seats. The reviewer had to repeat her reading till everyone was satisfied. In another centre one reading had to be repeated 78 times. Often as many as 40 books are reviewed by one reader in one week.

Popularity is fast-spreading beyond the sponsoring societies. Men's luncheon and other clubs are inviting the reviewers to give them sessions. The big stores, too, are taking it up.

Incidentally, the idea has created a new job for young women. These "review" appointments are well paid and are regarded as "nice work" etc."

Maybe there is something in it for enterprising publishers over here. Britain is virgin ground for the idea.



The elegance of well-made, polished brass has for some time been returning to favour as a furnishing motif in the home. Recently, however, we have noticed its return also for schemes of decoration in well planned executive offices. This photograph, taken just before Christmas, hence the holly, shows a typical example. The book-ends, hand blotter, ink-well, ash-tray, paper-knife, vase and salver are all of polished brass. A well-known brass manufacturer told us last month that orders for these and similar items are the highest for many years.

and it is not hard to get really hand-picked audiences.

Big Air Force is Good Business

WE do not talk politics here, but the Government's air armament plans and our future business have a lot to do with each other. The now-building Air Force is going to be a quite expensive matter; and business will have to pay.

But business is already paying for *not* having a dominating air fleet. Lost markets all over the world and undermined confidence in what remains is the price. We liked what one business man said last month: "It is far better to spend the money putting our lads to work building an A 1 power to keep the peace. The bad little tough boys of Europe can then choose between behaving themselves or going broke trying to out-build us."

Personnel Shake-up: Then What?

NOT for several years has there been such a shake-up in personnel as has been taking place this winter. The changes have been mostly on the sales side.

One well-known household appliance manufacturing firm, for the first time in its history, went outside its own organization for a general sales manager—and then made two changes within four months. The management felt that only a newcomer could take the drastic steps needed to regain its sales position.

Sales "appointments" columns in the newspapers have been unusually long. Many types of sales executive positions never before advertised have been appearing.

In at least one well-known motor-car plant important changes in the sales promotion staff were made not long before Christmas. We could, in fact, fill a column with the reshuffles we have heard about. And we do not hear everything that goes on.

These Pogroms are Bad

THIS sort of internal movement shows, more clearly than any official statistics can do, that management has been worried, not to say "panicked" in some instances, about sales.

We hope all this shuffling-up will work out as expected. The poor old sales departments, and advertising departments, too, are no strangers to pogroms when hard times set in. The bring-'em-back-alive sales manager is too often sought from outside and brought in as a panic measure while simultaneously the advertisement manager is figuratively put in irons.

That is not good campaigning. It is not good business. In most organizations plenty of sound, constructive economies can be made. These should

be put in hand while intelligent *development*, not emasculation, of the sales and advertising departments should be made.

The Boss Works Now

IN the great majority of well-run concerns intelligent economies are being made, especially in the small and medium-size firms where one man, usually the managing director, is absolute chief.

This type of man, in the more lavish days of the Nineteen-Twenties, used to O.K. the plans of his subordinates, telling them: "—now go ahead." To-day he is himself much more of a working executive. True, he still plans and initiates, but he also *executes* much more of the work himself. The main points of every plan he checks personally. Factors of responsibility and expenditure that were formerly left to the discretion of executives he now surveys and examines for himself.

This changed method of working means that he does more detail work, makes more decisions. But in this way

he can keep a stricter control of costs and commitments. More and more of his decisions directly concern the spending of money, not merely how much but *on what* and *with whom*.

He Will Spend To Save

THIS is very good for the firm—and good for those who do business with the firm.

With the critical and analytical eye of the chief supervising every move and department, red tape, rule-of-thumb and subordinate-prejudices make way for really progressive economies. Thus not only can costs be kept down and the need for raising prices avoided but suppliers to the firm get a clearer field in which to offer worth-while products in the way of better equipment.

The progressive manufacturer is in the mood for buying equipment that will further save him time, labour and money in his office and factory. But he is critical, highly critical. He will not spend unless he can *spend to save*. That is all the better for those suppliers whose products do a real job of constructive cost-saving.

No One *Has* to be a 'Little' Man

WHEN people say they are not born to be successful, what they are admitting is that they have not the energy or the driving application to make themselves what they *could* be.

T. Fowell Buxton said: "The longer I live, the more certain I am that the great differences between men, between the feeble and the powerful, the great and the insignificant, is energy, invincible determination."

MACHINES can do a vast amount of work in a very little time. But machines have no brains. They cannot create ideas. Our manner of living and our businesses in this generation are fast changing. Changes need a constant stream of new ideas. These ideas must come from *men*. Do not be afraid of the so-called "machine age."

HAS a man the right to entertain opinions contrary to those of his chief on business policy and methods? Yes. Every business needs a radical. To rightly constituted management he is very valuable.

THE trouble with most people is that they think with their hopes or fears or wishes rather than with their minds.—*Walter Duranty*.

UNLIKE a rare wine, a man does not improve with passive age. Additional years only add infirmity unless a man keeps himself active in striving to add to his effective worth each year.

THIS mechanized age turning employees into automatons? Banishing skill and individual capacity?

Do not believe it.
Here is a typical experience that scouts that idea. It comes from D. A. Laird,

Ph.D., D.Sc., who writes in his book, *Psychology and Profits*:

"I visited a glass factory. . . . A sweltering room, with low stools scattered about the floor, was peopled by slow-moving, dull-faced men, most of them over middle age.

"They were collecting small pellets of molten glass on the end of a blowpipe, roughly shaping them with a stick and blowing ornamental bulbs.

"We walked past this shop into one adjoining where there was a machine, two of them would go easily into the garage of the average small home.

"This room was much cooler than the other. Whir-r-r-click. The machine stopped. A bright-faced young man brushed away some fragments of broken glass and made an adjustment. He then went to the other side of the machine to see how the bulbs were coming.

"'Wonderful machine,' I said. 'Much easier than blowing bulbs by hand.'

"The director who was showing me through smiled. 'Wonderful, but not easier,' he replied gently. 'In that hot room are skilled glass-workers. But not one of them has the skill to operate this machine. A blowpipe, a stick, a mould and a long gentle blow is all they understand. The young man who has to keep this machine going is one of the most intelligent and skilled men we have. If anything happened to him, we'd have to get one of our research engineers to run it.'"

A BIG and beautiful desk may be necessary to impress visitors, but the executive who knows *how* to work uses only a fraction of the expanse of rare wood spread out before him.

SIGNS of life are bad signs in the office. Walking about, jumping up and down, wastes time and energy. In the well-planned office "activity" is conspicuously absent.

"We Plan to Sell a Million More Records this Year . . ."

Say Executives of H.M.V. (The GRAMOPHONE Co., Ltd.)

In An Interview With C. E. DAY

ONE of the outstanding developments in modern marketing is to "sell the idea" as well as the product, an imaginative policy which gives scope to ingenuity and bold planning. It is summed up in the injunction: "Sell the sizzle, not the sausage."

From this viewpoint it would seem that the modern way to market gramophone records is to sell the discrimination and selection in music that records allow. This in a measure is true, but many major factors influence the situation, as H.M.V. and other record manufacturers know. As a result they have attacked the market by providing a "vehicle" for sale of records: the radio record player. During the present 1938-39 season they plan to sell 100,000 record players, thereby stepping up sales of records by over 1,000,000.

Before dealing with the present schemes and campaigns, let me take you back a bit and examine the conditions which led to to-day's state of the market. In 1931-32 a serious slump hit the record trade; sales sank to about a sixth of their peak level. They continued at very low levels until the

1936-37 season, where there was slight evidence of an upward trend.

The reason for the slump is fairly clear. In the first case, sales of records of classical music were largely maintained; it was in the light and popular class that the market collapsed. That was the non-selective, non-permanent market. Light entertainment on the radio had grown to immense proportions; people could tune in at almost any time of the day to a great variety of light programmes.

At this period, too, the "talkies" had

But not by ordinary marketing methods. A 'sales vehicle' is being used—the radio record player. The market consists of 7,000,000* radio owners whose sets could be used with a player.

H.M.V. directors aim to sell 100,000 of these machines, which will widen the market for sale of over 1,000,000 more gramophone records this year. The article outlines this ambitious plan

arrived to increase the volume of easily obtained light amusement. There was, indeed, a surfeit of such entertainment and it tended to make this class of record superfluous.

But the surfeit was a good thing: it encouraged discrimination in light entertainment. This first became marked about two years ago when sales increased slightly. In the 1936-37 season the pace of the recovery quickened and sales were about 50 per cent above those of 1934-35, one of the "bottom" years.

At this point enters the record player. Last year (1937-38) H.M.V. directors decided that the time was ripe to pursue a vigorous sales policy. Previous experience showed that a straightforward policy of pushing records was not sufficient to bring big increases in sales volume. The two markets open did not respond on a large scale. The reasons were these: (a) radiogram owners as a whole were not "record conscious"; they tended to forget about the turntable they had bought in their radio set, or else were inclined to concentrate on classical type of records; (b) gramophone owners had fast decreased with the growth of radios, and those who still kept gramophones tended to lose the habit of playing them.

Policy To Develop 7,000,000 Radio Market

Merely to awaken the first and to re-develop the second market was not the vigorous policy needed. There were, however, about 7,000,000 homes with radio sets to which could be added a record player. And if the owners could be persuaded to buy a player, they would certainly use it. Moreover, as an article extraneous to the radio it would always be a visible reminder about record playing, a factor missing with radiograms where the record player is an integral part of the set.

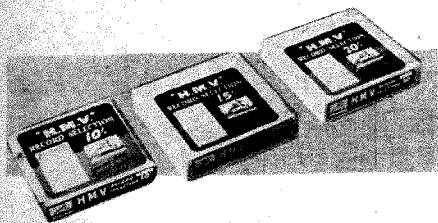
As a beginning, a player retailing at £3 19s. 6d. was produced, for sale to owners of the more expensive type of



Here is a page from the portfolio by means of which H.M.V. representatives showed dealers the type and scope of help to be given the trade. This page shows the display material provided; other sections gave complete details of sales arguments, etc. (see text). No small point was overlooked to get retailers solidly behind the campaign

radio, people who were keen on first-rate reproduction. These people could easily add the H.M.V. player to their set without any interference with its working as a radio.

This policy proved successful. Between 15,000 and 20,000 of these players



Selections of series of best-selling records, classified by experts and retailing at 10s., 15s. and £1, instance the auxiliary type of marketing plan used with the main campaign. Group selling and similar ideas have helped the upward sweep of record sales

were sold and sales of records went up 70 per cent as compared with the previous year.

Reassured by this success, H.M.V. directors this season decided to launch out on a major scale. They produced a record player that could be sold to most of the 7,000,000 radio-set owners.

Market research and experience showed that three major favourable factors were at work: (1) the spate of light entertainment had created wide public appreciation and, at the same time, discrimination; (2) this discrimination could be satisfied with records, selected and played at choice; (3) clarity in reproduction of music, song and speech from records was appreciated.

Obviously, if H.M.V. could produce a player at a price acceptable to the mass of radio owners, sales of records would be pushed up. Indeed, at first they considered the possibility of giving away record players, but various factors stood in their way. For instance, the cost of producing the machine was far too high and there was a big problem of distribution. It was unfair to ask dealers to act as distributing agents, a heavy cost to them. There was also the question: To whom should the machines be given?

Non-Profit Policy Is Way To Success

The directors adopted the alternative proposal to sell players at cost price to dealers and allow them a reasonable profit. Production investigation showed H.M.V. could make for £1 19s. 6d. (retail price) a record player to maintain their name for quality and performance.

The sales quota was set at 100,000 players. At this figure, while making little profit, the directors avoided a loss. This meant that they "financed" the attack on the record market and took profits from that source.

The scheme was started by 25 representatives in the field informing dealers of plans and getting them solidly behind the company. Each of 1,830 main retailers was mailed with a broadsheet. Then a representative called with a

portfolio which showed all the sales points and arguments that could be used; gave blue-prints of suggested window displays; included posters, strips, etc., of window and counter bills; gave a series of novelty and other mailing shots; provided pulls of the suggested Press advertisements for both general and dealer use, etc. It gave a complete picture of the campaign, detailed the help provided for dealers and the part each could play.

Dealer enthusiasm was quickly aroused; orders came in at a pace even greater than anticipated. There were several reasons for this. A major point was that a new market was opened up for many retailers; at least, a business which had been in decline was revived. And every record player sold meant the sale of some records, a tendency that finds favour with all dealers. There are no returns or trouble with records; no servicing to do, and a good, sure profit on sales.

Meanwhile, the Press advertising campaign had been launched. All the national dailies and 45 provincial newspapers carried announcements. On average the advertisements, 11 in. triple column size, appeared in each paper once a week. In addition to this, of course, was local advertising by dealers in which the company helped as agreed in individual arrangements.

Coupons Used To Get Mailing List Names

The campaign has been and is very successful. Coupons have been included in the advertisements to obtain some direct measure of response. The result to date is about 20,000 inquiries. These names and addresses form a useful addition to the firm's mailing list, one reason why coupons were used.

Actual sales of players since the campaign was launched in the autumn total over 65,000. This is ahead of schedule and by the end of the current season the 100,000 mark should have been easily passed.

Sales of records have, of course, risen with the players. Although I mentioned that the directors aim to sell over 1,000,000 records, this is not a figure worked out to schedule. Records cannot be sold on that basis. They present the problem of selling an intangible product. That is why the company's policy is to feature "selection" and "discrimination" as making records something more than a recording of a favourite piece of music or entertainment.

A difficult factor to deal with is that records have no uniform appeal. One record may sell around the 50,000 mark, another only 5,000. The variation is vast. Even the lists of new records vary greatly from month to month, and there is also the "seasons" to cope with. Still, one can measure the improvement since the campaign was launched. As compared with this time last year, sales are over 70 per cent up.

An important feature which justifies the directors' policy is that this increase has taken place without additional advertising of records. That has been

made possible to some extent by special effort to widen the range of recordings in the field of light entertainment. The needs of the markets are being more closely investigated.

Marketing Ideas Help To Increase Sales

There have been, however, some new marketing ideas used to stimulate sales. One is the issue of sets of three records in a folder. For instance, a complete "turn" by Max Miller is recorded on three records and sold together in a folder, although each record can be sold as a self-contained unit. But in a folder (price 6d.) the retailer is mostly able to sell three records instead of one.

Another innovation is "Record Selections." There are 28 selections costing 10s., 15s. or £1. They contain a series of best-selling records which have been classified by experts as being very suitable selections for starting the hobby of forming a record library.

The point here is not merely selling a

HIS MASTER'S VOICE
ALL STAR VARIETY BILL

MAX MILLER Singer, Pianist, Vocalist, Actor, Dancer, Comedian, and Master of the Microphone	JACK HYLTON & HIS ORCHESTRA Singer, Pianist, Vocalist, Actor, Dancer, Comedian, and Master of the Microphone
GERALDO AND HIS ORCHESTRA Singer, Pianist, Vocalist, Actor, Dancer, Comedian, and Master of the Microphone	PAUL ROBESON Singer, Pianist, Vocalist, Actor, Dancer, Comedian, and Master of the Microphone
LOUIS LEVY Singer, Pianist, Vocalist, Actor, Dancer, Comedian, and Master of the Microphone	REGINALD FOOTE Singer, Pianist, Vocalist, Actor, Dancer, Comedian, and Master of the Microphone
DUKE ELLINGTON Singer, Pianist, Vocalist, Actor, Dancer, Comedian, and Master of the Microphone	TOMMY HANDLEY AND HIS PALS Singer, Pianist, Vocalist, Actor, Dancer, Comedian, and Master of the Microphone
LUPINO LANE Singer, Pianist, Vocalist, Actor, Dancer, Comedian, and Master of the Microphone	GINGER ROGERS Singer, Pianist, Vocalist, Actor, Dancer, Comedian, and Master of the Microphone
KENTUCKY MINSTRELS Singer, Pianist, Vocalist, Actor, Dancer, Comedian, and Master of the Microphone	THE LAMBETH WALK Singer, Pianist, Vocalist, Actor, Dancer, Comedian, and Master of the Microphone

TAKE THEM HOME NOW—

While there has been no increase in advertising of records, dealer display efforts have been encouraged. Here, for example, is a window bill which ties up closely with the record-player campaign and features popular recordings in light entertainment

batch of records in place of a few that might be chosen independently; it is more subtle. Often the average man would like to hear various singers and pieces of music, but he knows very little about selecting the proper records. He finds difficulty in making up his mind. In addition, he is often prevented from inquiring because he does not know how to pronounce titles and names. The "Selections" are aimed to overcome those difficulties.

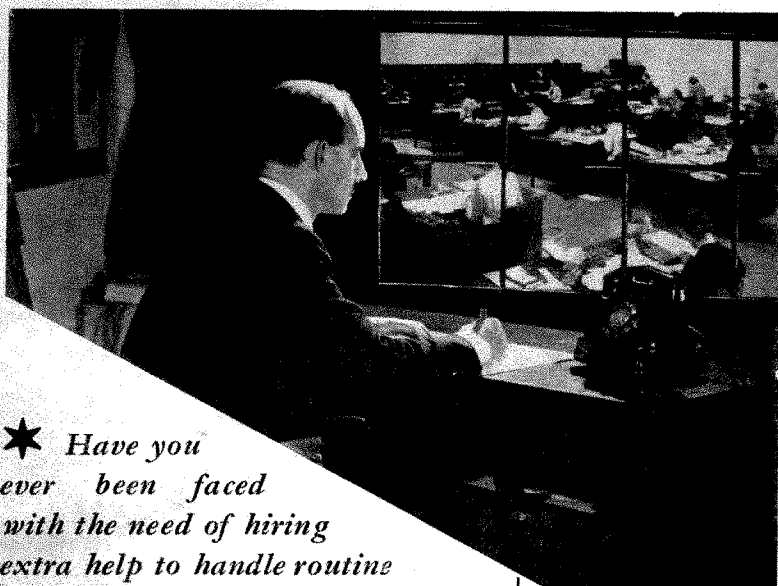
These are all small points in the total scheme of re-developing the record market. The main point must remain the production of the "sales vehicle"—the record player. That reopens the market on a vast scale, and this first big attack has shown the way to a new and major sales success.

PRIMUS

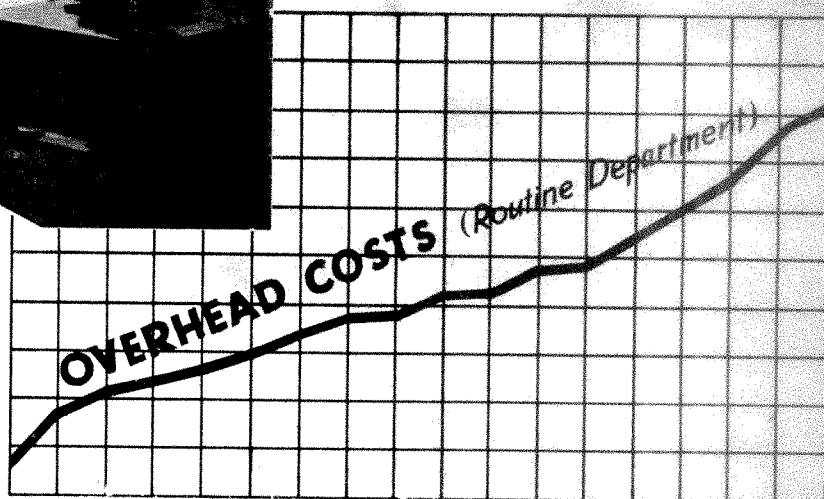
PREVENTS

THESE UPWARD

TRENDS



★ *Have you ever been faced with the need of hiring extra help to handle routine work of a duplicate nature necessitated by increased sales?*



SUPPOSE normally you employ 10 girls to deal with multiple-record work (i.e., progress-forms, despatch-notes, requisitions, billing, etc.) Then you find yourself faced with gradually-increasing business necessitating a larger amount of repetitive typing. Let us say a 20 per cent increase. On this basis you would need 2 more girls. In other words, at least another £3 or £4 a week—£150 or £200 a year—goes on to your wage-bill.

The introduction of PRIMUS Continuous Forms will provide you with a leeway sufficient to accommodate the extra work without adding to overhead. The reason is simple, for it has been proved time and time again that the difference between not using and using PRIMUS is 33½ per cent, or one hour in every three of each typist's time.

Even in normal conditions PRIMUS Continuous Stationery, used in conjunction with the PRIMUS Typewriter-attachment, effects a definite cut in costs. Its use prevents disruption caused by staff-absenteeism during vacation-periods or sickness, and enables any sudden temporary rush of transactions to be carried through smoothly without staff working overtime.

Let one of our consultants come in and explain to you the application of the PRIMUS System in your organisation.

Carter - Davis Ltd

QUEEN ELIZABETH STREET · S.E.1

HOP 0204-5-6

Four Record Sales Years . . .



Mr. J. P. Van den Bergh

Created by a Woman Sales Promotion Executive

This Company said: "Why not a woman executive to direct the publicity of a domestic product appealing to women? In theory, a logical idea . . . but how would it work in practice?" The Board decided to try, though it had misgivings. The experiment was wholly successful. Doubts proved unfounded and expected advantages were far exceeded

An Interview With

J. P. VAN den BERGH

Managing Director, Van den Berghs and Jurgens Ltd.

TO-DAY we claim for Stork margarine the biggest sale of any proprietary article in the grocery trade of Britain. The last four years especially have shown a strikingly large annual increase in sales, culminating with 1938 (despite its months of tension and crisis) showing a sales volume which is the highest for this product in the whole of the company's history.

The achievement of such progress for a highly competitive product has been made by sales promotion plans developed along soundly constructive lines, backed, of course, by appropriate advertising in the national and trade Press.

Four years ago we decided on a bold experiment. We would appoint a woman as advertising manager for Stork margarine.

As a theory this sounded logical. A woman to sell a domestic product to women.

Theory, however, is so often widely different from practice that the idea of appointing a woman to this executive position was received by the board with some misgiving. Even granting a woman's complete knowledge of the product in question there had to be considered such internal factors as how would a woman work with male executives of the organization? Assuming that her personality was such that she could collaborate effectively with these executives with whom she would be personally in touch, how would she be regarded by the sales force in the field, men with whom she would not be in close association?

A Mind for Planning, AND for Detail

In view of the fact, also that the position would require the executive to

work directly with me, personally, there naturally arose in my mind some speculation as to the capacity of a woman to work on sufficiently broad lines. The female mind is acknowledged to be efficient at planning and carrying out detail, and also at working to pre-arranged schedule. I was therefore uncertain how a woman would prove in a job that demanded initiative instead of a pre-arranged schedule and broad vision and big-scale planning instead of comparatively narrow detail.

However, after weighing all the factors, we decided in favour of the experi-

ment; so in 1935 Miss Mabel Blackmore was appointed advertisement manager for Stork.

Four years have now elapsed since that appointment, and I think the period is a sufficiently long one to provide conclusive test of the experiment.

In this company our conclusion is that the experiment is a proved success. Looked at from the standpoint of cold figures, the four years show, as I say, substantial annual increases, culminating in a record sales year. Examined from the standpoint of personal relationships, none of our doubts materialized. On the contrary, Miss Blackmore has established herself as an executive well able to collaborate with her male associates both inside and outside the organization. Further, she has displayed that rare double capacity: ability to think and plan on a large scale while at the same time retaining a genius for meticulous detail.

I do not want to detract from the really high qualities which Miss Blackmore has displayed, but in this article I am not citing them in an adulatory sense: I am merely putting forward the facts as important points of management, as the result of an experiment which must be of interest to many firms engaged in selling in the domestic market.

Let me, then, review briefly the spheres of sales promotion which Miss Blackmore has influenced and developed. It will be seen that they are spheres in which a woman's influence can be particularly effective.

For instance, we produced more and better educative booklets. These explained to the housewife how to make wider and more economical use of margarine. This was an expansion of constructive selling. Sponsored by a woman the material was put forward more from the helpful, domestic angle



Miss Mabel Blackmore, Advertisement Manager of Van den Berghs and Jurgens Ltd. Her work as organizing executive of sales promotion matter for Stork Margarine has fully substantiated the Company's contention that a woman is the logical person to sell a domestic product to women

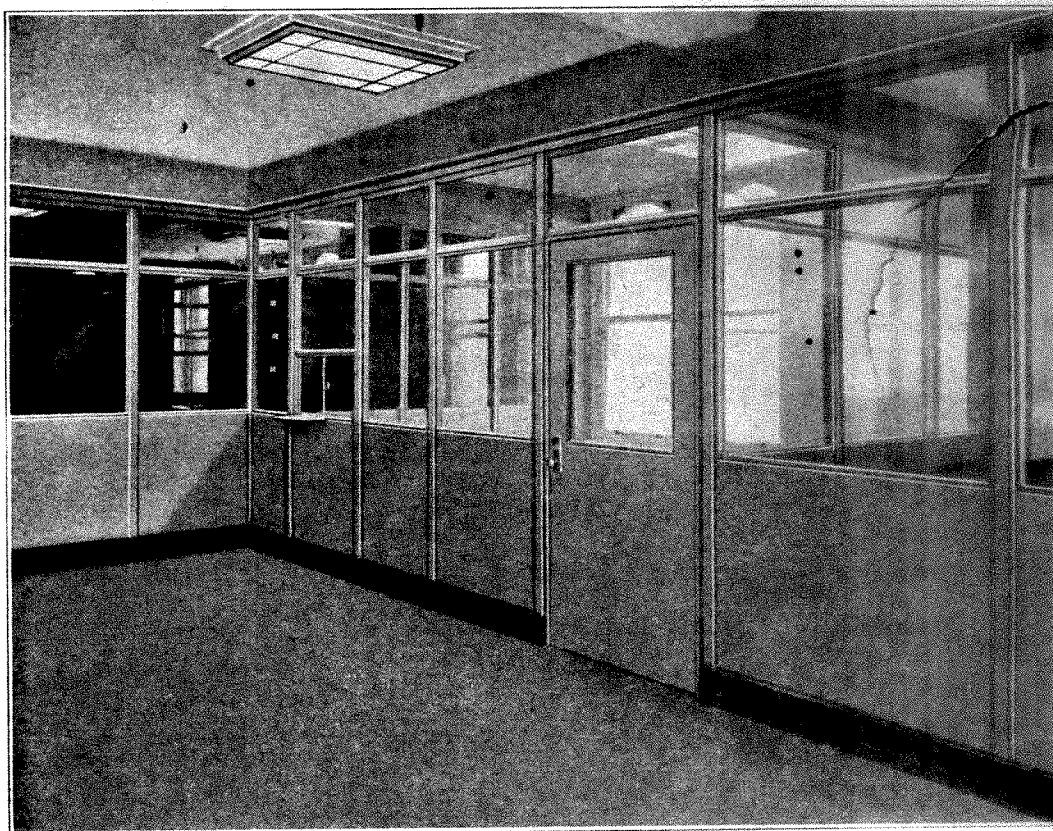
Easy to re-arrange to suit changing conditions

Art Metal

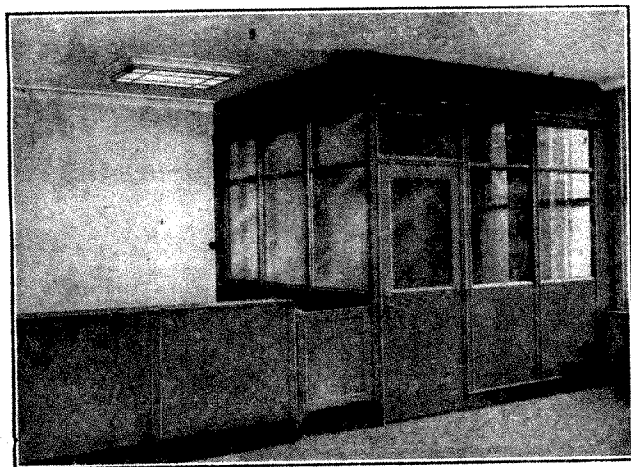
SECTIONAL PARTITIONING

IS

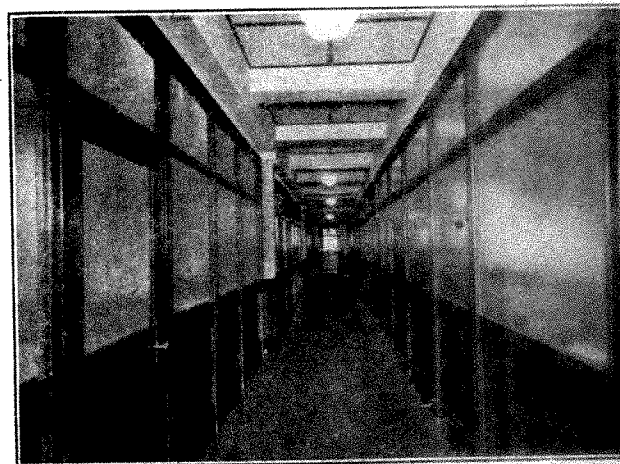
- Secure
- Solid
- Substantial
- Soundproofed
- Fire-Resisting
- Easy to install
- Equally easy to take down and re-arrange to suit changed conditions.



Photograph by courtesy of Messrs. Harrods, Ltd., London, S.W.1



Photograph by courtesy of Messrs. Harrods, Ltd.



Photograph by courtesy of Woolwich Electricity Dept.

With Art Metal Sectional Partitions it is possible to utilise all office space to the maximum advantage. A given area can be adapted to the needs of any business. The partitions can be very quickly erected, yet give the appearance of a permanent structure. They can, however, be changed and interchanged, added to or reconstructed with ease as required. They are solid,

secure, substantial, sound-proofed and fire-resisting. By installing Art Metal Steel Partitioning you are, at one time, meeting the requirements of to-day and forestalling the needs of to-morrow. Should you at any future time need to make further internal alterations you will be in a position to do so without scrapping your existing partitioning.

Send for Catalogue No. 605

Art Metal CONSTRUCTION COMPANY, 201 BUCKINGHAM PALACE ROAD, S.W.1
 Showrooms: 31 Kingsway, London, W.C.2. (TELEPHONE Sloane 3201-6 lines.)

and less from the purely sales angle.

Then there were extended programmes of demonstrations at the leading stores and exhibitions throughout the country. These were arranged by Miss Blackmore and conducted by teams of women trained by her.

At these demonstrations not only were the more normal uses of margarine shown, but emphasis was also given to new uses, such as that of cream-making with small "home" machines. Hitherto only butter could be used for this process. Actual demonstration was the most convincing way to prove to women that butter did not hold this monopoly and that Stork was highly effective and more economical.

Under Miss Blackmore's supervision the work of our research kitchen was also improved. In this sphere the woman's practical and domestic mind was invaluable in shaping the experimental work towards strictly utilitarian ends. Pure research, as such, was not allowed to run away from the chief aim, which was to help the housewife of moderate means in the conduct of her kitchen.

The results of work in this kitchen were incorporated in the educative booklets and included in the demonstrations. Incidentally it was this research kitchen that discovered, among other new uses for Stork, the home method of cream-making which I referred to just now.

It Needed a Woman to See This Fault

Outside the field of actually handling the product Miss Blackmore's influence was also beneficial.

For example, in point-of-sale display matter for retailers' shops. We had always used cut-outs, showcards, etc., featuring women. That of course was natural and logical. But men who had previously been in charge of this work invariably designed these figures to portray their own ideas of feminine beauty, glamour, or whatever it was they imagined the perfect woman to possess.

But that is not *selling*. And it took a woman executive to perceive this point.

One of the first things Miss Blackmore did, therefore, was to substitute for these ethereal creations personalities more in line with what women themselves would admire.

"Every housewife," argued Miss Blackmore, "has at the back of her mind the type of women she herself would like to be, or which she admires, and these standards are certainly not the pretty-pretty, chocolate-box types which are the average man's 'ideals'."

Our display matter was therefore recreated so that the types really appealed to women, instead of incensing them or leaving them merely indifferent. An important factor in point-of-sale material.

Our film and radio publicity has also been extended, and again adjusted from the feminine standpoint, to appeal to women.

The average Englishwoman has a strong sense of humour, but it takes a woman to understand it.

Humour, of course, is the most difficult of all factors in publicity to handle successfully. When it is used, therefore, its points must be apt and unerringly correct for the types of mind to which it is directed.

Women, too, have particular likes and strong prejudices in the matter of entertainment. And only a woman, too, can really sense and appreciate these emotions.

In blending humour and entertainment in our film and radio publicity Miss Blackmore had the advantage, as it were, of "inside knowledge." She replanned these advertising media so that they embodied an intimate appeal to women.

The readjustments she made were

not, of course, revolutionary. They were mere subtle changes of angle, the excision of some matter, the gradual introduction of new. But the net result over the four years has been tremendous. The popularity of our film and radio campaigns has increased by thousands per cent.

It is these sales promotion factors, therefore, under the guidance of a woman executive, that have been directly responsible for building the tremendous sales increases which for four years we have enjoyed for our main line, Stork margarine.

It is a highly successful experiment in sales promotion management that might well be tried in other fields.

How to Tackle The Problem of the Old Employee

Safeguarding him and his dependants by a smooth-working scheme that embraces all details

A VERY difficult problem confronting employers to-day is that of dealing with employees who, through age and infirmity, are no longer fit for their work.

This problem is most serious for those employers who enjoy a reputation for fair and just treatment of their staff. In the bad old times the difficulty was met by the summary dismissal of any employee who was no longer worth his wages, but in these enlightened days employers are recognizing to an increasing extent their responsibility towards those who have given long and faithful service.

Far-seeing employers are beginning to realize that definite provision for the old age of their staff is, in fact, good business. Not only are they able, with a clear conscience, to retire their older employees, but relations with the whole of the staff are improved.

These Difficulties for Employers No Longer Exist

Many employers in the past have realized their moral obligations in this respect, but in the absence of suitable facilities they have not had the opportunity of giving practical effect to their wishes. Thus they had no alternative but to leave the question open until the actual retirement of an employee, and any provision made depended on conditions ruling at the time.

In the absence of a definite plan the amount of pension was settled by expediency rather than justice. The pension they would have liked to provide was often too expensive, particu-



larly if several employees retired within a short period. In difficult financial conditions even the continuance of a pension once granted was in danger.

This method was unsound from a financial point of view, since a charge on future profits of an unknown amount was gradually accumulated.

In the past such arrangements were, perhaps, inevitable, but the facilities offered by assurance offices operating group pension schemes are now such that the old haphazard methods can no longer be justified.

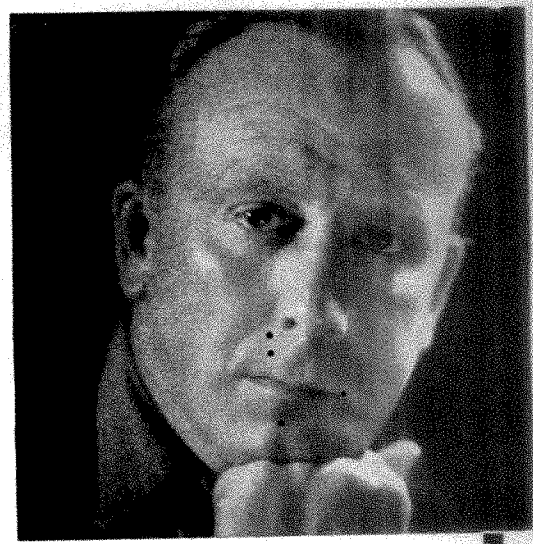
The schemes available are the result of continuous investigation and their simplicity, elasticity, comprehensiveness and economy can meet the requirements of any employer. Their essential features can easily be explained to all classes of workers and their elasticity makes them adaptable. The employer can adopt scales of pension and death benefits suitable for the particular circumstances of his own business, which

(Continued on page 34)

P17691

S.P.B. Mais speaking...

PRIDE OR PREJUDICE?



"'Mankind,' said Dr. Johnson, 'always prefers to be reminded rather than informed,' so you will forgive me if I remind you that machines do not have brain-storms, do not get over-tired, aren't liable to think of other things, aren't, in a word, liable to human frailty.

"Therefore, where they can be used they should be used to the fullest extent. May I remind you, too, of a machine which has pretty well revolutionized most accounting work, the Remington Electric Accounting Machine?"

"You have, of course, heard of them. Is it Pride or Prejudice that has so far prevented you from adopting them, pride that your accounting could not be better done, or prejudice against all mechanical contrivances?"

S.P.B. Mais

A SINGLE MACHINE CAN BE APPLIED TO ONE OR MORE OF THE FOLLOWING OPERATIONS :

- | | |
|--------------------|-----------------------------|
| INVOICING | WAGES |
| RECEIPTS | COSTING |
| ANALYSIS | STORES RECORDS |
| ADDING AND LISTING | HIRE PURCHASE |
| LEDGER POSTING | REGISTRAR'S DEPARTMENT WORK |
| PAYMENTS | |

NO OTHER MACHINE, AT ANY PRICE, GIVES YOU ALL THESE FEATURES

- 1. Complete electrification of all alphabet and numeral keys, and of carriage return.
- 2. Complete flexibility of registers, providing extra accumulations without rebuilding or making machine obsolete. Number of additional registers limited only by length of carriage and capacity of registers.
- 3. All registers visible for columnar accumulation and cross computation. All registers equipped with direct subtraction, providing contra - entries within specific column, and instant correction of errors.
- 4. Automatic tabulation and interchangeable form bars.
- 5. Complete visibility of writing line, permitting instant checking of every entry posted.
- 6. Automatic line proof of each individual entry provides instant audit.
- 7. Independent control of each related form to be prepared simultaneously.
- 8. Uniform legibility of all records entered simultaneously.
- 9. Automatic locks against mis-operation.

Write for full details to Dept. J.J. 702. Accounting & Adding Machine Div.
REMINGTON TYPEWRITER CO. LTD., 100 Gracechurch Street, London, E.C.3
 BRANCHES IN ALL PRINCIPAL CITIES. Phone: Mansion House 3333

REMINGTON

ACCOUNTING MACHINES

Overtime Work Banished, Office Overheads Reduced, also . . .

"WHAT led us to install an Accounting Machine? Well, we were working on a straight-forward hand system, where the ledger card was written up as a carbon copy simultaneously with the day book. It was a good system, providing to some extent one of the advantages of machine accounting—combined records. But it was rather laborious; mistakes were not readily detected, and the ledger cards were at times hard to read. These, however, were small disadvantages compared with the working 'peak' experienced every month at statement time."

"Then the whole accounts staff had to put in four or five days' intensive effort with considerable overtime. Again, the preparation of receipts, cash book, and paying-in slips were separate operations similarly entailing much labour and duplication of work."

Staff Released for More Important Work

"Machine accounting has smoothed out the peak, given us consistent accuracy, enabled us to telescope several operations into one, and has released our accounts staff for valuable control work in the production of comprehensive statistics."

"The results, you see, are not particularly spectacular: they are just sound common-sense working methods—rational methods—made possible and practicable by the special facilities afforded by the Remington Accounting Machine."

"Despite the yearly considerable increase in Carlsberg Lager sales, the machine installed has, without strain, easily met the additional accountancy

1. *More Output from Same Staff*
2. *Scattered Work Now Centralized*
3. *Better Control at all Points*

By C. H. COSTELLO, A.C.I.S., A.C.W.A.

From an Interview with

CARLSBERG DISTRIBUTORS, LTD.

work: the system providing that elasticity which is so superior to the previous hand methods."

And now to describe how it is done.

Sales Ledgers and Statements

The bulk of the work consists of posting from copy sales invoices, and for this the day book copies of all invoices are sorted daily into ledger order, whence a "pre-list" on an adding machine gives a control total.

The following forms are then posted simultaneously by the operator:

(1) CUSTOMER'S STATEMENT

This is posted up to date ready for dispatch to the customer, with the account balance shown. The entries represent a replica of the ledger account.

(2) COPY STATEMENT

This is produced without any extra effort and provides a complete record of each account for the traveller. It is important where travellers collect payments from customers, and some discretion with regard to further orders may be allowed.

(3) LEDGER ACCOUNT

The information is concise, accurate and up to date. The amount owing is clearly shown in the account balance column. The progress of the account is easily followed in all respects.

(4) PROOF SHEET OF SALES POSTINGS

This provides a complete summary each day of all postings to the ledger. Important totals are shown in the last line of entry. These totals are automatically computed by the machine.

Throughout each posting all adding and computing of amounts is automatic. The operator moves no lever: she merely types the amounts.

Let us follow through the amounts posted on the first line of a proof sheet of sales postings (4). These have also been made, of course, to forms (1), (2) and (3) at the same time.

The first amount is £22 7s. ("Pick-up"). This is the existing balance on the account about to be posted. It is copied from the statement (1), this

You Can Avoid Your Share of This £20,000,000 a Year Burden

THE common cold costs employers in Britain at least £20,000,000 a year in wages paid to absentees. Then on top of that there is, for disorganization of work and loss of business, a further loss that is simply incomputable.

Despite the fact that staff welfare is to-day recognized as a major responsibility of Management and that increased attention is being given to safeguarding employees' eyesight, teeth and so on, and in protecting them from accidents, very little has hitherto been done to combat this scourge, the common cold.

Throughout all the winter months the common cold, cough and influenza are the main enemies of staff health-efficiency.

Lacking better measures, employers know that it is a far better thing to encourage an employee to stay away immediately the symptoms of these complaints appear than to wait until his condition becomes worse and he is forced to be absent. By that time he will have spread the infection among his colleagues.

It is a still better thing to guarantee in the first place that the employee's resistance is never lowered sufficiently to lay him open to illness of this kind.

Generally speaking, the root of all minor ill-health among workers, particularly in winter months, rests in malnutrition or

improper feeding—a diet lacking in essential vitamins. It should be ensured, therefore, that workers get those vitamins, preferably by placing a suitable vitamin preparation at the disposal of every employee at a specified time each day.

Firms that have already tackled the problem in this way have found that it has resulted in a striking improvement in the standard of health among their staff. In one instance regular distribution of the "anti-infective" and "sunshine" vitamins "A" and "D" in the form of Radiostoleum capsules has resulted in such an improvement in general health and efficiency, apart from the reduction in time lost, that the expense incurred in providing the material was more than justified.

This is not only a course of action that carried with it a definite insurance against loss of labour, but ultimate effects should be a high consideration to those who have both the welfare and the efficiency of their employees at heart.



TYPEWRITING EFFICIENCY

goes up -

WHEN EDIPHONE

Voice-Writing

"TAKES DOWN"

The weakness of old fashioned dictating methods is exposed in the word "shorthand-typist." An employee with two distinct duties, one of which constantly interrupts the other, is working under a heavy handicap.

Ediphone Voice-Writing makes every typist a *specialist*. Typing at her own speed direct from the executive's recorded voice, without the strain of deciphering uncertain shorthand notes and without interruption, she can accomplish more and do better work in greater comfort. Even more important is the convenience to the executive of being able to dictate immediately the need arises, without waiting.



EDIPHONE USERS INCLUDE

Bedfordshire County Council, British Thomson-Houston Co., Ltd., The Chloride Electrical Storage Co., Ltd. (Exide), Ford Motor Co., Ltd., The Gramophone Co., Ltd., Imperial Chemical Industries, Ltd., Kodak, Ltd., Legal and General Assurance Society, Ltd., J. Lyons & Co., Ltd., Morris Motors, Ltd., Oxfordshire County Council, Royal Borough of Kingston—and many others.

EDIPHONE SYSTEM OF
Voice-Writing

Write for full particulars or FREE DEMONSTRATION
AT YOUR DESK without obligation.

THOMAS A. EDISON LTD., VICTORIA HOUSE, SOUTHAMPTON ROW, W.C.1
(*Phone HOLBORN 9988)

Branches and Dealers in all Principal Cities

being the top form in the machine. The amount is added into a cross-computing register.

A dissection of the invoice is then made into "Bottle," "Bulk," and "Packing." The amounts are stored in separate registers which accumulate

the totals of these columns automatically. The amounts are also cross-cast into another register for checking purposes.

Following "details," the net amount of the copy invoice (£9 4s. 6d.) is posted to the "debits" column.

At this point the machine has computed the new balance of this account by cross-adding £22 7s. od. ("Pick-up") and £9 4s. 6d. ("Debit"). The result, £31 11s. 6d., is entered in the "Account Balance" column on all forms simultaneously. A star sign should follow

4 SALES POSTINGS																		
PICK-UP	BEER		PACKING	DATE	DETAILS	DEBITS	CREDITS	ACCOUNT BALANCE	PROOF	ACCOUNT NO.	PACKING DELIVERED				PACKING RETURNED			
	BOTTLE	BULK									CO	11	12	13	CO	11	12	13
22 7 0	1 16 0	7 8 6		25 APR 38	GOODS	9 4 6		31 11 6*	22 7 0	B.14								
3 7 6	1 16 0			25 APR 38	GOODS	1 1 0		4 8 6*	3 7 6	B.17								
24 8 0	7 4 0	9 18 0		12 0	25 APR 38	GOODS	17 14 0	42 2 0*	24 8 0	B.21								
1 16 0	1 16 0			7 6	25 APR 38	GOODS	2 3 6	2 3 6*		B.27								
2 4 0	1 16 0	1 4 9		25 APR 38	GOODS	2 3 6		4 2 9*	2 4 0	B.31								
144 12 0	3 12 0	4 19 0		13 6	25 APR 38	GOODS	9 4 6	153 16 6*	144 12 0	B.36								
1524 12 6	16 4 0	23 10 3		1 16 0	25 APR 38	POSTED	41 10 3	1566 2 9*	1524 12 6	CONTROL								

All these column totals are automatically computed by the Remington Accounting Machine.

3 LEDGER CARD									
BEER		PACKING	DATE	DETAILS	DEBITS	CREDITS	ACCOUNT BALANCE	PROOF	ACCOUNT NO.
BOTTLE	BULK								
1 16 0	4 19 0		13 6	3 JAN 38	GOODS	7 8 6	7 8 6*	7 8 6	B.14
1 16 0			7 6	17 JAN 38	GOODS	2 3 6	9 12 0*	7 8 6	B.14
3 12 0	4 19 0		7 6	31 JAN 38	GOODS	8 18 6	18 10 0*	9 12 0	B.14
1 16 0	4 19 0			14 FEB 38	GOODS	6 15 0	25 5 0*	18 10 0	B.14
				15 FEB 38	CASH		6 15 0*	25 5 0	B.14
1 16 0	2 9 6			28 FEB 38	GOODS	4 5 6	10 13 0*	4 15 0	B.14
3 12 0	4 19 0		13 6	14 MAR 38	ALLOWANCES	9 4 6	19 16 0*	10 13 0	B.14
				14 MAR 38	GOODS		9 4 6*	19 16 0	B.14
1 16 0	2 9 6			25 MAR 38	CASH	4 5 6	13 10 0*	9 4 6	B.14
3 12 0	4 19 0		6 0	11 APR 38	GOODS	8 17 0	22 7 0*	13 10 0	B.14
1 16 0	7 8 6			25 APR 38	GOODS	9 4 6	31 11 6*	22 7 0	B.14
					CASH		18 1 6*	31 11 6	B.14

2 COPY STATEMENT									
CARLSBERG DISTRIBUTORS LTD.					CARLSBERG HOUSE, 49 BELVEDERE ROAD, S.E.1 LONDON.				
"BELL" HOTEL, STATION ROAD, UPWINSTER.					CARLSBERG HOUSE, 49 BELVEDERE ROAD, S.E.1 LONDON.				

1 STATEMENT									
CARLSBERG DISTRIBUTORS LTD.					CARLSBERG HOUSE, 49 BELVEDERE ROAD, S.E.1 LONDON.				
"BELL" HOTEL, STATION ROAD, UPWINSTER.					CARLSBERG HOUSE, 49 BELVEDERE ROAD, S.E.1 LONDON.				

3 LEDGER CARD									
BEER		PACKING	DATE	DETAILS	DEBITS	CREDITS	ACCOUNT BALANCE	PROOF	ACCOUNT NO.
BOTTLE	BULK								
1 16 0	4 19 0		6 0	1 APR 38	A/C REND.		13 10 0	22 7 0*	
1 16 0	7 8 6			25 APR 38	GOODS	9 4 6	31 11 6*	31 11 6	B.14
					CASH		18 1 6*	31 11 6	B.14

As Shown Above

1 & 2 STATEMENTS: Customer's statements are posted in duplicate, the copy being sent to the representative at the end of the month. Each statement gives complete record of all transactions for the current month; up-to-date balance is shown at each posting.

All statements are ready for dispatch immediately last posting has been made for the month.

3 LEDGER CARD: Posted simultaneously with the Statements and Proof Sheet.

Each time a posting is made the account balance is machine computed and shown

in the "Account Balance" column for immediate reference.

The triangle sign after each amount in the "Proof" column proves previous balance has been correctly entered by the operator at the start of the posting.

Note particularly that this is proved before each card is removed from the machine.

4 PROOF SHEET OF SALES POSTINGS: This Sheet is automatically built up by the Remington Accounting Machine as the sales invoices are posted to the various accounts and statements.

It provides complete analysis of all debit postings to sales ledger each day and shows accurate up-to-date accounting figures in condensed form.

IN BRIEF

This Accounting Machine—

1. Posts at one operation Customers' Statements in duplicate, Ledger Accounts and appropriate proof sheet.
2. Computes balance of each account posted.
3. Accumulates totals of columns headed "Bottle," "Bulk," "Packing," "Debits," and "Credits."
4. Computes the total of Sundry Debtors at each run of postings.
5. Proves, before each card is removed from this machine, that the previous account balance has been accurately picked up.

In a great many cases labour and time is halved through this simple, efficient, up-to-the-minute system of producing hand- or typewritten forms—giving up to five copies in the case of hand-written forms—up to twelve in the case of typewritten forms. Many firms have been able to reduce their labour costs to a minimum. Write for details to-day!

Write it

on ALACRA

Don't just say it!

The Business Forms with the Punch

NAME		DESCRIPTION		PRICE		AMOUNT	
1169	Wm R. Bucknall	✓	✓	1	4	1	4
1168	Wm S. Hildard	✓	✓	1	10	2	10
1167	Wm S. Hildard	✓	✓	2	1	10	2
1166	Wm S. Randolph	✓	✓	1	3	16	3
1165	Wm S. Parker	✓	✓	9	3	3	3
1164	Wm S. Parker	✓	✓	1	4	2	4
1163	Wm S. Parker	✓	✓	2	6	6	6
1162	Wm S. Parker	✓	✓	3	2	7	3
1161	Wm S. Parker	✓	✓	1	4	4	4
1160	Wm S. Parker	✓	✓	2	9	9	9
1159	Wm S. Parker	✓	✓	3	2	2	2
1158	Wm S. Parker	✓	✓	3	1	9	3
1157	Wm S. Parker	✓	✓	1	3	2	3
1156	Wm S. Parker	✓	✓	4	6	6	6
1155	Wm S. Parker	✓	✓	1	3	6	3
1154	Wm S. Parker	✓	✓	2	1	4	2
1153	Wm S. Parker	✓	✓	1	2	2	2
1152	Wm S. Parker	✓	✓	2	9	9	9
1151	Wm S. Parker	✓	✓	1	3	4	3
1150	Wm S. Parker	✓	✓	1	1	9	1
1149	Wm S. Parker	✓	✓	2	1	6	2
1148	Wm S. Parker	✓	✓	1	3	9	3
1147	Wm S. Parker	✓	✓	4	2	6	4

Cash

1 4 6

1 10 2

2 1 10

1 3 16

9 3

1 4 2

2 6

3 2 7

1 4

2 9

3 2

3 1 9

1 3 2

4 6

1 3 6

2 1 4

1 9 2

2 9

1 3 4

1 9

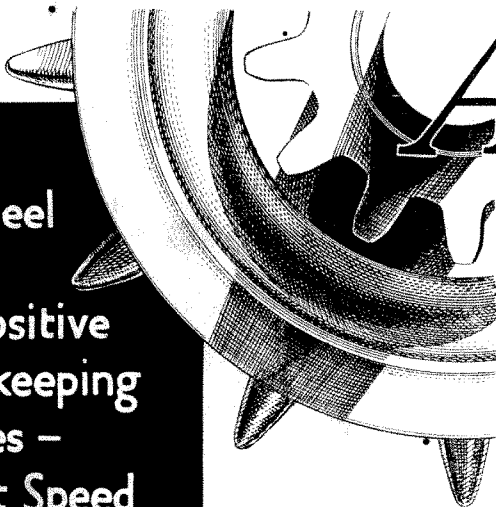
2 1 6

1 3 9

4 2 6

29 4 9

20 4 11 8 19 100



The Pinwheel Feed for Positive Bookkeeping Figures – At Speed

ALACRA

MANCHESTER

NO MATTER WHAT YOUR BUSINESS *ALACRA* CAN ASSIST YOU

this amount as mechanical proof that the new account balance is correctly entered.

The "Line Proof of Pick-up" is part of the complete machine proof of accuracy which functions while each account and statement are still in the machine. For this purpose the original balance of the account (£22 7s. od.) taken from the statement is repeated in the "Proof" column, and the two amounts must agree, otherwise a machine lock comes into action. Both amounts must be taken from the original source, for the "Pick-up" column is obscured by a masking which prevents the operator inadvertently taking the amount for the "Proof" from the "Pick-up" column. No error, therefore, can pass unrevealed.

The machine check by means of the adding and cross-computing mechanism is so complete that an error in entering any sterling amount is detected before each Ledger Card and Statement are removed from the machine. This means instant automatic control. It avoids wasted time taken up in searching for errors. It establishes confidence in the complete accuracy of the book-keeping, as shown by the proved correctness of the following items:

- (1) The "Pick-up" amount.
- (2) The amounts entered in columns "Bottle," "Bulk," and "Packing," i.e. (£1 16s. od.), (£7 8s. 6d.), (nil).
- (3) The debit (£9 4s. 6d.).
- (4) The new "Account Balance" (£31 11s. 6d.).
- (5) The "Proof" (£22 7s. od.).
- (6) The invoice totals.

Suppose, for example, the invoice now posted shows a total of £9 3s. 6d. instead of £9 4s. 6d. This would disagree with the cross-cast of £1 16s. od. ("Bottle") plus £7 8s. 6d. ("Bulk") which the machine does in its stride, and a machine lock would operate immediately.

Thus the operator has nothing more to do than enter the amounts comprising the posting. So long as every figure is accurate, well and good. But should a figure go wrong, the machine instantly, and of its own action, takes the matter in hand, demanding immediate correction of the mistake. Any amount known to be wrong is extracted quite simply from all the adding registers which it has entered, including registers producing column totals as well as those employed in cross-casting.

After extracting the incorrect amount, the correct amount is entered. This process automatically adjusts all totals in the machine to the correct figures.

On completion of the day's posting, a comparison of the machine grand total with the "pre-list" total proves that no copy invoice has been omitted, and is a double check that every amount has been accurately posted.

The Sales Ledger Control Account is posted at the same time as the totals are entered on the proof sheet of sales postings, and it therefore shows in summary form the daily totals of postings to the ledger. The account balance column shows the net total of all balances in the ledger day by day.

This account provides the control over the personal accounts in the Sales Ledger, and at all times a summary of the balances will amount in total to the balance of the Sales Ledger Control Account.

Posting of Cash Received: Receipts and Cash Book

The principles are similar to those employed in posting debits, but there is less figure work.

The following forms are posted simultaneously: Customer's Statement, Copy Statement for Traveller, Ledger

Account, Proof Sheet of Cash Postings.

The previous balance of each account is entered in the "Pick-up" column, and the amount of cash received is posted in the "Credits" column. The new account balance automatically computed is then extended and is followed by the star proof sign of accuracy. The previous balance is then repeated for "Proof" purposes. The total of the "Credits" column accumulated by the machine is agreed with the total of the Cash Book to prove that all amounts have been correctly posted. The posting to the "Sales Ledger Control Account" is represented by the last line on the proof sheet of cash postings.

Cash Book

The same accounting machine used for all the ledger posting is also employed for the work in connection with the Receipts Cash Book.

The conversion of the machine from one class of work to another is perfectly simple, and is performed by the operator in a few moments.

Again the principle of combined processes is employed, and the following forms are completed and totalled simultaneously: Receipts to Customers, Receipts Cash Book, Bank Pay-in Slip.

The entries on the receipts are, of course, some distance apart, while the copies of these entries on the Cash Book and Bank Pay-in Slip are comparatively close together. This is easily achieved, however, by reason of the separate control which the machine maintains.

The machine automatically totals the Cash Book, so that here again all the work in connection with the Cash Book and its allied forms is completed at a single operation instead of a number which were previously separate and disconnected.

Use All the Electric Current You Pay For

Apparatus To Reduce Costs For Power Users

THE flow of alternating current along your electric supply cables is not steady like water through a pipe, but consists of waves following each other at a frequency of (usually) 50 per second. We, therefore, speak of a 50 cycles, or 50 periods, supply.

The power of this supply depends upon two factors:

- (1) Voltage (or pressure); and
- (2) Amperes (or current).

Either of these might be represented by its own set of waves. If these waves coincide, which means that they are "in step" with each other, the whole of the current in the circuit is doing useful work.

If, however, the two sets of waves are "out of step," only a part of the current

flowing through the lines can be usefully employed. There is, therefore, a ratio between the true power doing useful work and the apparent power of the supply system. This ratio is called the *power-factor*.

In a circuit in which both voltage and current are in step, the power-factor is 100 per cent, or unity. For certain technical reasons, such as the inductive effect of a motor or other apparatus, the current may lag behind the voltage. Then, as already explained, only a part of the current is available for doing useful work, and we speak of a "lagging" power-factor.

For example, if only 75 per cent of the current does useful work the true power is 75 per cent of the apparent power, and

in this instance the power-factor is said to be .75. The remaining 25 per cent of current in the circuit is termed "wattless" or idle current. It does no useful work, but tends to heat up the cables.

This current, which is virtually wasted, has to be paid for.

Many supply authorities, therefore, either penalize the consumer for a bad power-factor, or give a rebate for a satisfactory power-factor which allows a better employment of their distribution system.

To improve the power-factor and so help users to obtain the highest useful power from the current they pay for and to get also the best possible terms from their electricity supply authority, the *Wego Condenser* has been introduced.

This unit is easily fixed for "group" or "individual" correction of motors or other apparatus that need power-factor correction. It is claimed that in most cases it pays for itself in less than twelve months—and of course it reduces power costs permanently.

If you would like further details of the cost-saving unit, write for the booklet *Static Condensers*, from the *Wego Condenser Co., Ltd.*, Bideford Avenue, Perivale, Middlesex.

To all Employers

STAFF PENSIONS

As an employer you know that an efficient staff is as vital as efficient machinery.

Elderly employees whose usefulness is diminishing constitute a problem which must sooner or later be faced. Long and loyal service must be recognised, but, on the other hand, the highest possible standards must be maintained.

A properly devised pension scheme will help you to solve your staff problems.

THE PRUDENTIAL ASSURANCE COMPANY LTD.

..... have arranged Pension Schemes for almost every branch of industry and commerce

..... have built up an organisation specially equipped to render Service in connection with Pension Schemes

..... have a wide experience of all problems arising in connection with Pension Schemes.

This experience is at your service. Expert advice and quotations of cost are given gladly and without obligation.

A PRUDENTIAL scheme preserves the best features of a self-administered pension scheme, guarantees the benefits, and is applicable to large and small firms.

**WHY NOT INVESTIGATE
THE COST?**

A descriptive booklet will be supplied if application is made on business note-paper.

THE PRUDENTIAL
Assurance Company Ltd.
HOLBORN BARS LONDON, E.C.1

Modern Furnishing For 1939 Offices

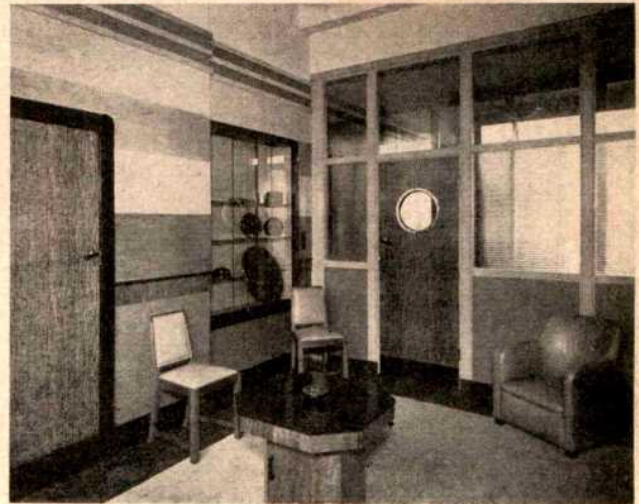
This Slide Rule Is Also A Calculating Machine

A VEST-POCKET slide rule that has a patented adding and subtracting device on the reverse side has recently been put on the market. The rule is only 5 in. long and fits easily into a waistcoat pocket.

The instrument combines the usual features of a modern slide rule with those of a calculating machine. The mechanism provides six columns for adding and subtracting. Multiplication, division, roots, etc. can all be calculated on the device, which is operated by means of a stylo. The mechanism is so arranged that a move in the wrong direction is automatically indicated by stoppage and can be rectified instantly.

The product is known as the "Arithma" slide rule and sells at £1 10s. A desk model, 10 in. long, is available at £2 5s.

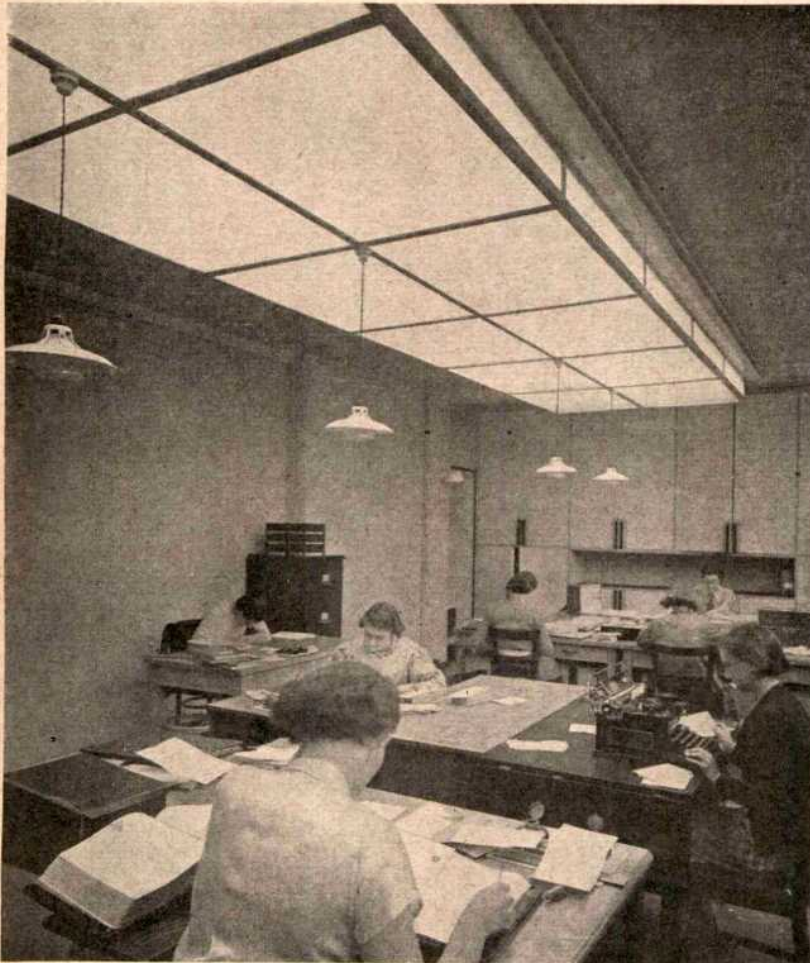
Right: This reception room at the Tyseley Works of Bakelite Ltd. shows how Bakelite can be used as a furnishing product. The flush doors, doors, architraves, window sills and table top are in laminated sheet. Colour scheme is black, mottled green and grained walnut. Upper parts of walls in cross-banded sycamore with contrasting bands of figured sycamore. Note the use of fluted glass, as more dignified and light-effective than opal or frosted glass



Don't Guess At Your Lighting: Measure It

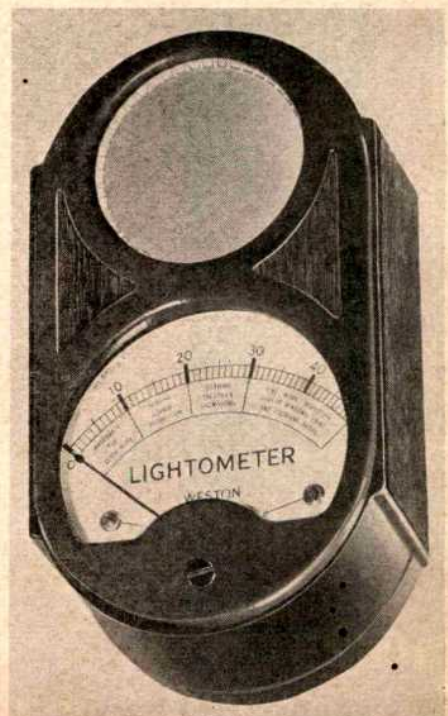
BUSINESS executives are becoming more and more alive to the fact that work—in the office as well as the factory—demands specific standards of illumination. Unless these standards are appropriate for the kind of work to be done, inefficiency and higher costs are the inevitable results.

There is no need, to-day, to guess at these standards. They can be measured as quickly and accurately as one measures time or temperature. The Weston Lightometer, shown below, is an instrument for measuring illumination standards. It is small enough to be carried in the pocket; costs (with a leather case) £3 3s.; and is made by the Weston Electrical Instrument Co., Ltd., of Enfield, Middlesex.



This Glazing Material Has a Double Advantage

High intensity but diffused lighting, coupled with temperature-insulation are the features offered by Thermolux glass for roof glazing. When this photograph was taken the August sun was directly overhead yet not only was its light diffused but the heat insulating properties of the glass prevented an undue rise of temperature within the office. In winter, naturally, this insulating property operates in the reverse way, conserving heat within the building by preventing its transmission to the outside surface of the glass. These two qualities of this glazing material (light-diffusion and heat-insulation) enable the entire sky to be used as a source of illumination, as the position of the sun is immaterial. With ordinary roof glazing, of course, only a north skylight is practicable. This necessitates more expensive roof construction and limits the usable daylight to a small fraction of the maximum available. The above installation of Thermolux glass is at the offices of the Mutual Clothing Co., Leicester



"Our **POWERS** Equipment will still further improve the handling of our business"



"The Powers system which has now been working very satisfactorily for some time, is very simple in operation. Invoices are turned out much more speedily than under the previous method; price extending, checking, etc., are entirely obviated and sales figures are available instantly. There is no doubt that greater efficiency has been obtained in the office and the factory also benefits from receiving its despatch copies earlier."

"Our Powers-One equipment has proved to be an effective solution to our problem of efficient

stock control and departmental analysis of purchases and sales. To-day it is not only supplying us with an up-to-date stock ledger and a daily departmental analysis, but also much other information which is essential for the control of a business of a wholesale warehouse."

"Our adoption of the Powers method of accounting has not only directly facilitated the actual rendering of our invoices but has also brought about a general improvement in the whole of our accounting procedure."

Let us show you how you also can benefit by installing Powers punched card accounting equipment. At your request and without obligation a comprehensive system for your work will be submitted and a demonstration provided at the address below or at any of our branch offices.

All Powers equipment can be purchased, hire-purchased or rented on very attractive terms

POWERS-SAMAS ACCOUNTING MACHINES, LTD.

POWERS-SAMAS HOUSE, HOLBORN BARS, LONDON, E.C.1

Whatever Your Book-Keeping System . . .

This Equipment is Designed to Speed It Up

THE "Machine-Postindex," introduced by Art Metal Construction Company, is a system of filing ledger cards.

It is not designed to alter any user's present system of book-keeping, but to improve it and to speed it up. What it does is to provide:

- (1) Instantaneous visibility of all index lines.
- (2) Speedy selection of cards.
- (3) Reveal at a glance the absence of any missing card.
- (4) Guard against misfiling.
- (5) Control of overdue accounts.
- (6) Quick insertion of new cards and removal of completed cards.
- (7) Self-contained units.
- (8) Saving of space; requires less than half the space usually required by visible records.
- (9) Good condition of records at all times.
- (10) Any desired degree of fire resistance.

The Card Arrangement Gives Clear Visibility

Instantaneous visibility of index lines is obtained by staggering the card sideways, so that the right hand or left hand edges of ten or more cards are visible at a glance. The upper portion of this "visible edge" is made more easily readable by cutting off the top corner. The diagonal portion of the visible edge thus formed is used for the name or title of the record, and the vertical visible edge at the side of the card may be used for detailed signalling of any desired information.

Alternatively, if detailed signalling is not required, the posting of the record can begin at the extreme edge of the card. Again, this margin at the side of the card may be ruled horizontally to indicate the spacing of mechanically posted entries.

The bottom of each card is punched with slots which, when the cards are staggered, fit over a metal bar which runs from the front to the back of the tray. The slots are punched in the centre of the cards and are higher than the portions of the edge which carry the weight of the card.

Apart from the cut corners and the slots, the cards are just ordinary record cards, so any existing ruling can be adapted to this system.

These Slot Spacings Are Standard

There are two standard spacings of the slots at the bottom of the cards— $13/32$ in. and $19/32$ in. respectively. The former is generally used for hand-posted records, and the latter is standard for machine-posted cards.

The width of the vertical visible edge is the same as the width of the slot spacing employed.

The visible part of the edge is indicated by a line (generally a double line) running to the bottom of the cards. This line is the guide for filing in the tray. When the edge of the card is placed along this guide line on the previous card, the metal rod in the middle of the tray will engage auto-

By
'BUSINESS' Investigator

matically in the correct slot in the bottom edge of the card.

If desired, both top corners of the cards may be cut obliquely to show a visible edge either on the left or on the right of both sides of the card. This is necessary when the current balance is wanted always at the front of the card, irrespective of which side of the card is being used.

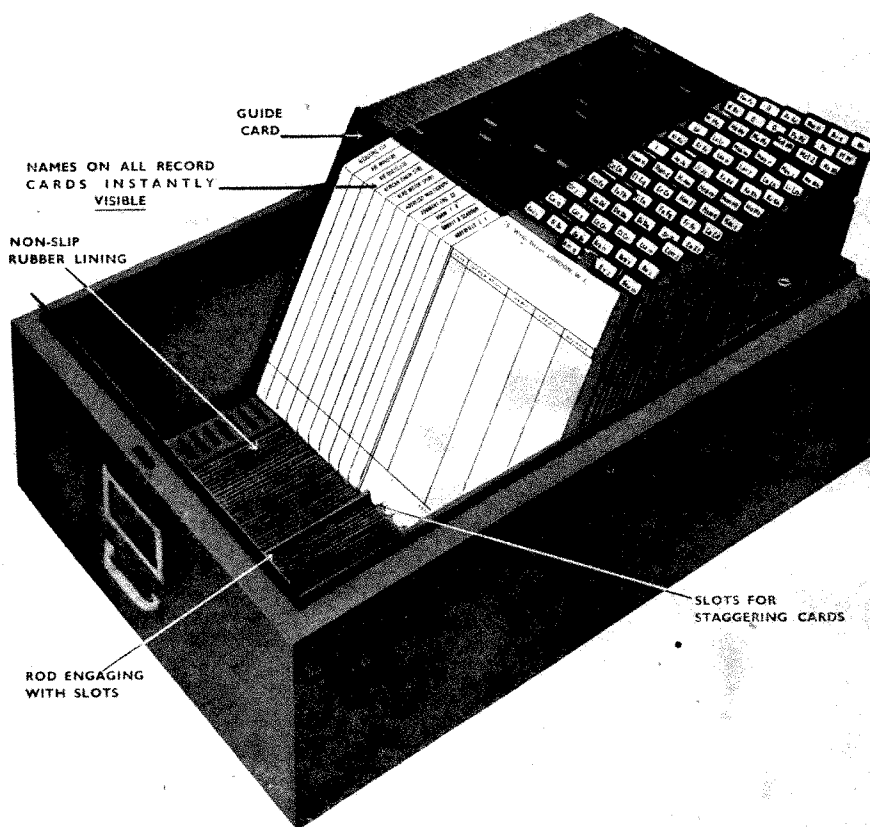
Sometimes it helps to use folded or double cards, either to provide more writing area or to duplicate a record.

The extreme top of the diagonal visible edge to a depth of $3/32$ in. is printed

sides and protruding metal lugs at the bottom. The space for filing the ledger cards between the guide cards is fixed by means of the metal sides of the guide cards. The fact that each row of cards is separated by the guide cards means that the records are protected against undue wear.

The Steel Containers: Any Suitable Type is Usable

There is no limit to the type of steel equipment that may be used for this line. Certainly all the art metal standard filing lines and special units may be adapted for the Machine-Postindex. Generally speaking, however, posting trays on trolleys are



black, so that when every card is in position in a tray the top of the cards present a solid black appearance. When a card is withdrawn, a white space indicates the absence of that card. If a position is deliberately left blank for some special reason, or if a row of cards is intentionally left incomplete, a plain pink card is inserted to show that no current record card is missing.

If a record card is carelessly misfiled, it will automatically break the continuous black line and so reveal the mistake at a glance.

The Guide Cards Protect the Records from Wear

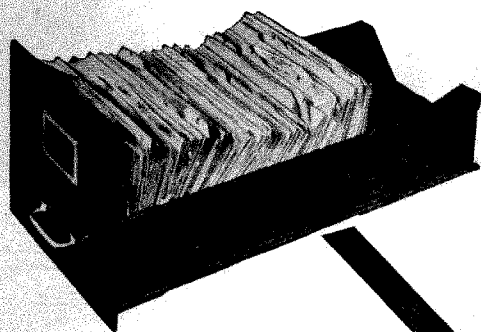
The guide cards between each set or row of ledger cards are fitted with metal

most efficient because of their mobility and the convenient operating height which they provide, but every installation must be studied and recommendations made in the light of all the circumstances of space, personnel, machines, activity, etc.

Although the actual tray or drawer looks much like an ordinary index cabinet, it has outstanding features. There are in each tray four steel guides provided with flanges which fit into slots in the bottom of the tray. These guides, together with the rubber covering on the bottom of the drawer, effectively prevent cards from moving out of position in the file.

There are channels on both sides of the drawer to receive the metal lugs on the guide cards to prevent them from rising and this gives the whole installation a neat appearance and prevents undue wear and tear.

This **NEW YEAR'S** Resolution★ and REVOLUTION★
★ TO SCRAP BLIND FILING ★ TO INSTALL

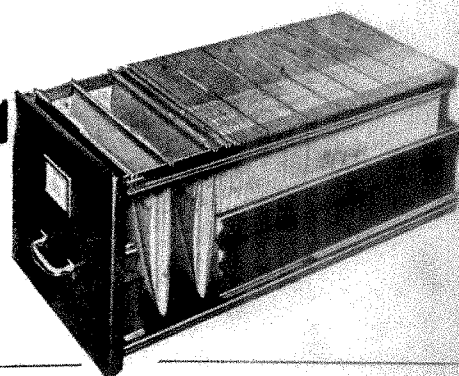
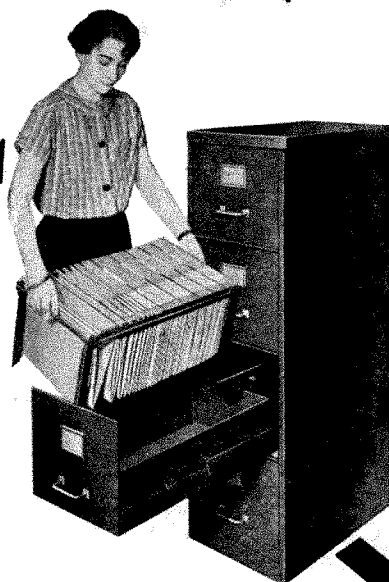


C.V.S. VISIBLE FILING

EQUIPMENT

so that what I want can be found
WHEN I WANT IT not 10 minutes after, or 5 minutes too late to prevent loss of potential business. To do away with last year's and previous years' loss of time, temper, inefficiency and disgruntling of clients due to delay caused by out-of-date and complicated filing methods.

- 1 C.V.S. makes every title visible on a level plane—it is just as easy to find a folder in the lowest drawer as in the top.
- 2 C.V.S. can be installed in any standard vertical filing cabinet, quarto or foolscap.
- 3 C.V.S. makes accurate filing and finding faster than by any other method.
- 4 C.V.S. can be expanded or contracted at will—yet the sequence cannot be broken accidentally.
- 5 C.V.S. pockets automatically adjust themselves to the bulk of their contents.
- 6 C.V.S. can be adapted to every method of filing, i.e., alphabetical, numerical, subject, etc.
- 7 C.V.S. visible coloured signals facilitate classification and coding.



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JUST IN TIME...

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TIME RECORDERS LTD.
38 EMPIRE WORKS, HUDDERSFIELD



FIRE!

Even a modest conflagration in your premises could cause incalculable damage if your more vital records were harmed. Your premises and stock are of course insured, but no insurance could repay the years of effort represented by your ledgers, sales records, minute books and the like. **FIRE-PROOFED CABINETS** can take care of these at a very moderate cost however, representing possibly less than just one year's premium on less valuable possessions.

Prices from 87/6.

Full price list on application.

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The *WRONG* and the *RIGHT* Of Office Lighting

By J. MORTIMER HAWKINS

Managing Director, Mortimer Gall & Co., Ltd.

THE standard of office lighting in this country is much below that in some Continental countries and in the United States.

The average illumination in offices in Britain is five foot-candles; the authoritatively recognized *minimum* for clerical work is exactly double that—ten foot-candles.

In many offices lighting installed twenty, thirty, even fifty years ago still

persists: lighting that was put in without regard to structural or any other features of the buildings. Points are often found located in unsuitable positions with the result that people work in their own light or suffer harmful glare reflected upwards from polished desks-tops and paper surfaces.

The greatest fault in office lighting is in the types of fittings used. These are generally antiquated and hopelessly

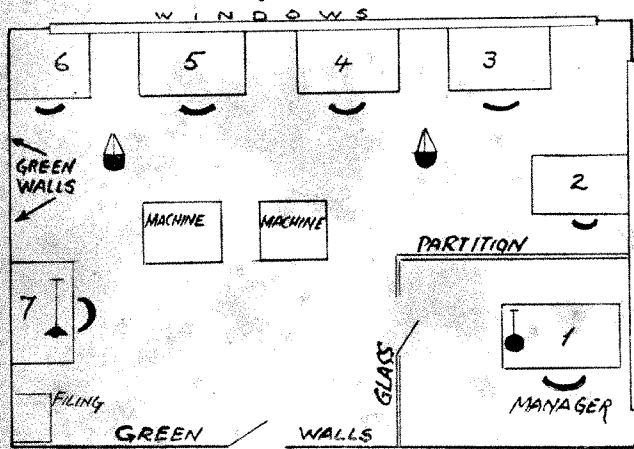
inefficient, or they are modern but wrongly applied. An example of this misapplication was described last month.

The two predominating types of obsolete fittings are the conical shade and the inverted bowl.

The conical shade was designed forty-five years ago for use with the old carbon lamps. The modern lamp filament is ten times more brilliant and, when used with this shade, emits a blinding glare that hinders rather than improves visibility.

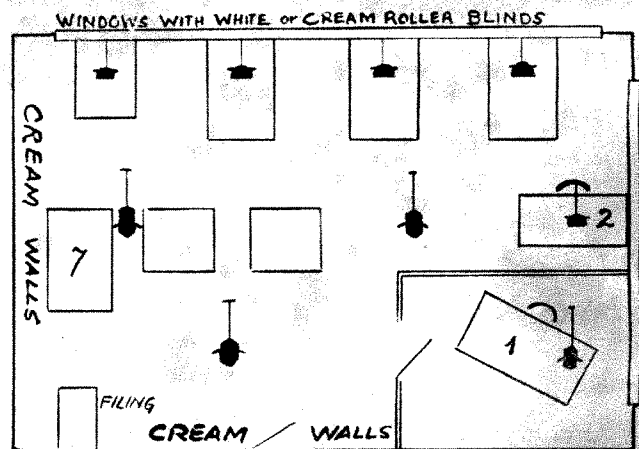
The inverted bowl was introduced as the harsh, shadow-casting light from the conical "shaded" lamps became recognized as unsuitable. It was the first attempt at diffused, semi-indirect lighting.

But these inverted bowls are extremely wasteful of current—they give only half
(Continued on page 34)



ABOVE: Bad lay-out and lighting. Workers at desks 3, 4, 5, 6 face full daylight; very trying on bright days. Person at desk 2 works in his own shadow. Manager at desk 1 has shadow of his own hand thrown across his work. Lighting of desk 7 is incorrect, gives glare and high contrasts. Two bowl fittings are wasteful and inefficient. Of the light given by spherical fitting in the manager's office over half will be wasted because 3 of his 4 walls are of glass. These transmit light and do not reflect it usefully into the room. Lighting for filing cabinet is inadequate. Green walls, bad light-reflectors

BELOW: Corrected lay-out and lighting. No one faces windows, desks receive natural light from the left. Windows fitted with cream blinds. This prevents waste of light at night as they act as reflectors. Desks 2, 3, 4, 5, 6 each have local diffused light, supplemented by improved general lighting. General lighting is adequate for desk 7 and the two machines. Filing cabinet is now flooded with diffused light—no more faulty filing. Cream walls, by reflection, make the general lighting more effective—you get more of the light that you pay for. Because manager's light is more direct and diffused less of it is lost through glass partitions.



Modern Stock Control . . . Cuts Costs at These 9 Points

EVERY day more and more businesses are utilizing the most modern methods for the accurate control of costs at every point.

In manufacturing concerns, however, there is still too much of a tendency to leave the control of stores and stocks to methods that do not line up with this high modern standard of accuracy.

Stock is as valuable as cash; and is it not inconsistent for a firm to spend hours locating an error of sixpence in the petty cash when the entry, in their profit and loss account, of the figure representing "stock" is often no more than a rough approximation?

Accurate stock records are a tremendous help to economic management, not only at inventory time but throughout the working year. Consider the factors of control they introduce:

1. Preventing Leakage and Waste:

Leakages from any cause are revealed; e.g. pilferage, defective work, incorrect issue of materials, inefficient storage, etc.

2. Overbuying or Excessive Manufacture: As the rate of consumption of each article is revealed, there is no excuse for buying or for making goods in excess of requirements.

3. Running out of Stock: Stocks can be maintained at a level indicated by the stores ledger, so that delays do not occur in the execution of orders because of shortages of supplies.

4. Elimination of Dead Stock: Slow-moving or dead stock is brought to light, and steps can be taken to dispose of it.

5. Inefficient Buying: If the market price is subject to fluctuation, and the issues are credited at current market prices, the stores ledger will show losses or gains on buying.

6. Perpetual Inventory: The stores

ledger provides a perpetual inventory which is more likely to be accurate than a physical inventory taken against time. Several items can be checked weekly with an actual count, discrepancies investigated and corrected, so that the book figure is as reliable as any figure can be.

7. Location of Stock: The stores ledger definitely indicates where each item of stock can be found.

8. Good Effect on Staff: Stores will be handled and issued with greater care when employees know that a check is being kept, and that someone will be called upon to answer for shortages.

9. Fire Insurance Claims: The stores ledger provides valuable evidence in the event of fire.

Even that does not cover the whole range of advantages to be derived from a proper system of stores records, as businesses differ; but any progressive executive can visualize the possibility it offers in his own concern.

In addition to giving improved control and greater accuracy, a modern system is much speedier and more simple to operate than less efficient methods.

In the matter of getting precise information on exactly how to employ a modern



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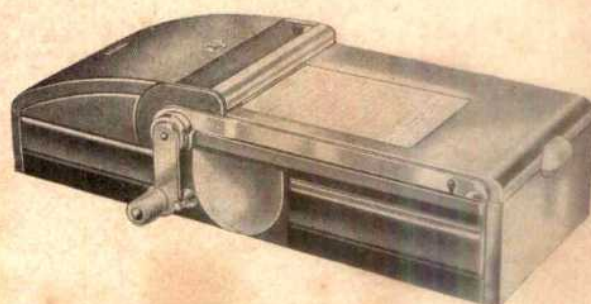
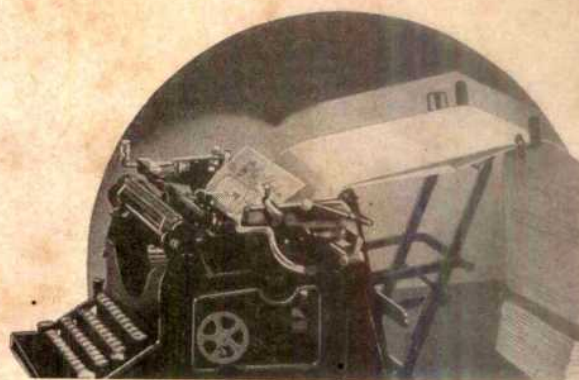
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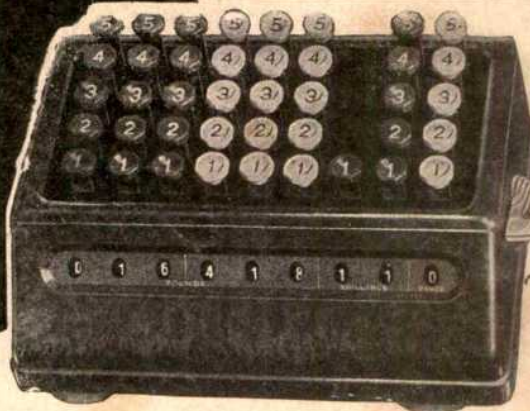
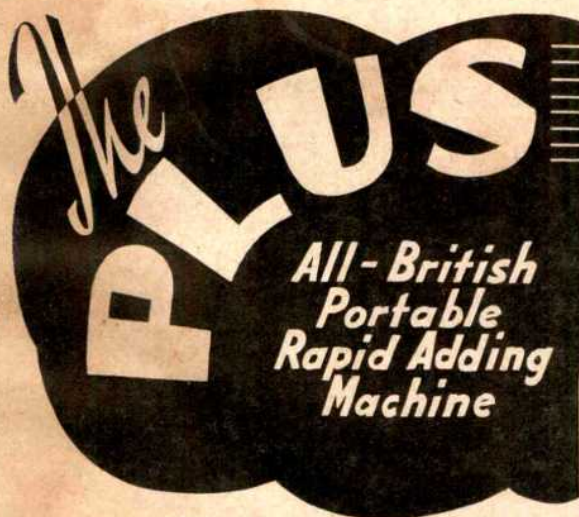
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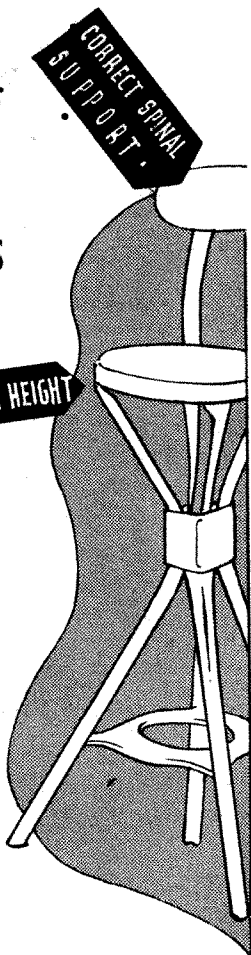
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system the business man has hitherto been somewhat handicapped.

While there has been available for his use plenty of text-books on general stores control, there has been a dearth of material that shows him, specifically, how to apply a complete system.

It was to meet this need for useable information that Moore's Modern Methods, Ltd., issued "Stock Records," a special book by W. A. Smith, F.C.W.A., explaining in illustrated detail the complete application of modern stock control.

This is not a heavy treatise. It is a 2s. 6d. book of 72 pages, liberally illustrated with types of forms and records actually in use. A book for the man who needs to use it.

The chapters cover the classification and sub-classification of the kinds of stores (raw material, work-in-progress, finished goods, etc.); types of stores and stock ledgers; posting; ancillary records; plant and asset records; inventory; machine-made records, etc.

This constructive book can be obtained from Moore's Modern Methods, Ltd., 12 St. Bride Street, E.C.4.

The Right and Wrong of Office Lighting

(Continued from page 32)

the illumination of a modern fitting for the same current consumption. Also, they are prolific harbourers of dust and dirt—greatest enemy of efficient lighting.

In a recent test for a firm using inverted bowl fittings with 200-watt lamps I found the illumination yielded was only four foot-candles. By substituting modern fittings using 150-watt lamps the illumination was raised to ten foot-candles. This meant a twenty-five per cent saving in cost of current and a 150 per cent improvement in the illumination.

To the question: "What is good office lighting?" no standard answer can be given. The lighting depends upon the nature of the work to be illuminated and the structural features of the office.

Broadly speaking, there should be a good, shadowless distribution of general light, plus any local lighting needed for specific jobs such as, say, machine operation.

Never, however, should local lighting be used without general lighting, such a condition overloads the eye muscles with the constant work of trying to adjust themselves to the violent contrasts of brilliant light and dark surroundings. This rapidly produces eye-strain, headache and fatigue of the whole body.

I found this condition in one office where I made an investigation recently at the request of a director of the firm. This executive could not understand the high incidence of headaches among the staff.

I discovered that in the middle of the desks local lighting was giving intensities of thirty foot-candles, while even on the same desk surfaces, one foot away from the centres, intensities were no more than five foot-candles.

These contrasts, I explained, were causing all the headaches.

Tackling the Problem of the Old Employee

(Continued from page 20)

may include many different types of employment.

Within wide limits the incidence of the employers' contributions can be adjusted to cause the minimum financial strain so that the maximum economy can be secured. The interests of employees are fully protected and a contributor, or his estate, will always receive in any event benefits not less than the amount of his own contributions.

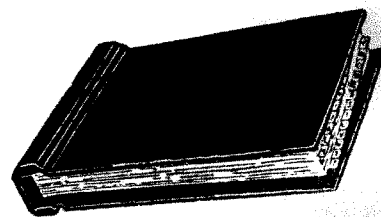
In broad outline a typical Scheme is as follows:

For each employee is provided a definite pension on retirement, and a capital sum for his dependents in the event of death in service.

The amount of pension depends on salary and length of service in accordance with a scale agreed by the employer, and the capital sum on death is usually one year's salary.

Provision is made for employees who withdraw before reaching the normal age for retirement or who retire earlier or later than this age. A married employee on retirement is given an option of taking, in lieu of the normal pension, a joint pension with his wife.

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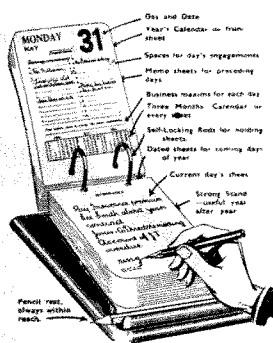
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(Continued from page 34)

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Production Reorganization

(Continued from page 9)

requirements from the office despatch instructions received allied to previous experience. Beyond this no planning of work was done, the instructions being haphazard in character. Even in the printing department each printing order had to take its chance and was subject to the whims of the sales department and/or works manager.

As regards stores and stocks, clerical records were kept in detail of raw

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materials and finished goods, but none with regard to components, and the latter were transferred direct from shop to shop.

Annual estimates of expenses were compiled departmentally but not linked with responsibilities for spending.

Results

In the Works: (a) Competition for supplies from the productive service departments.

(b) Uneconomic production.

(c) Misunderstandings of instructions, which were mostly verbal.

(d) Waste.

(e) Expenses incurred through emergency arrangements.

(f) Components not co-ordinated.

(g) No stores control—stocks piled up unnecessarily.

(h) Payment for non-production and for wrong production.

(i) No check on overhead expenses.

In the Estimating Section: (a) Poor co-ordination and co-operation between works and estimating practice, arising through the detail set out in the estimate not always being followed in the works.

In the Cost Department: No straightforward arrangement in the works on which to build a system, resulting in:

(a) The inability of the cost office to carry out its true function, the department really being a statistical records office. Departmental trading accounts were compiled, it is true, but largely based on estimates which in turn were far from accurate.

(b) Poor co-operation between works, estimating and costing.

Remedies Applied

In conjunction with a well-known firm of consulting management engineers, the following work was carried out:

1. A complete and comprehensive planning system was gradually installed. This, of course, involved detailed study of processes and operations which in turn gave opportunities for rearrangement of factory layout and stores.

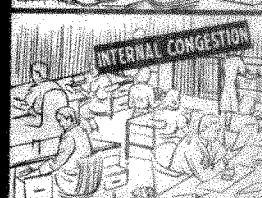
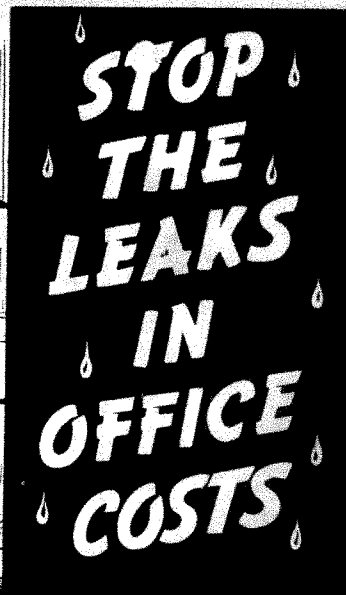
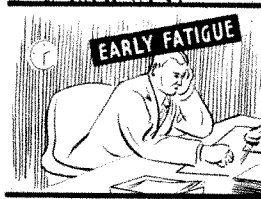
2. Creation of a stores unit with a chief storeskeeper and full clerical section.

3. Reorganization of estimating and costing departments, following upon the arrangements made in connection with planning.

4. Budgetary control of expenses. Taking each one of these remedies in detail:

1. Planning Schemes

The scheme installed covered the setting up of a central planning office with decentralized shop planning. It was



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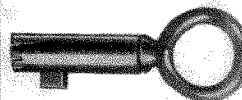
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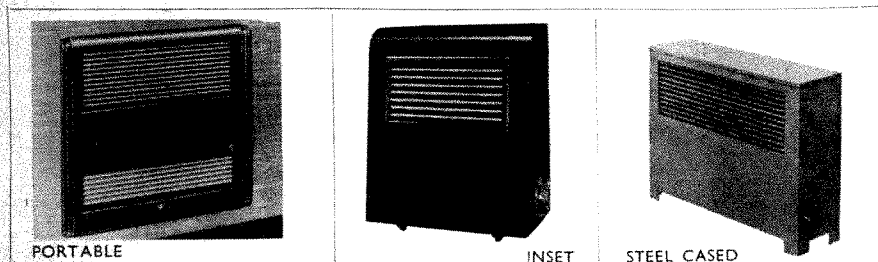
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put in gradually and took approximately two years to complete. The stages were as follow:

First Stage. One shop was taken and the production planned in the shop for that shop only. At this point, of course, there were still difficulties owing to the shop depending for its components on other shops. Having started the planning in the first shop, other shops were taken in logical sequence.

Second Stage. Central planning department created, the shop planners being grouped thereunder by sections.

Third Stage. Introduction of sales forecasting comprehensively for stock lines to cover not only printing orders but also making up requirements.

Final Stage. All orders for finished products, components and printing issued from the planning office, the general office order becoming in effect a mere delivery instruction ex stock.

METHOD: (a) Master route cards created for every product and component, setting out in complete detail the requirements as regards materials and labour.

(b) All works orders first planned in the central planning office by operations allocating the time for each operation, Gantt charts being used for the purpose. Detailed shop orders issued to the shops indicating starting dates for each operation, together with the appropriate requisitions for material.

(c) Shop orders received by shop planner and broken down on Gantt charts to machines. All work planned by shop planners for the next day, listed on a daily order of work and signed by the foremen. Daily delay reports created to show any production, as scheduled, not started, signed by foremen. Daily note of production inserted on daily order of work with reasons if work not started and when it would start.

Note

This article was originally given as an address at the Seventh International Management Congress held at Washington, U.S.A., in the summer of last year.

In this issue space is not available to contain the whole article. The conclusion will be published next month.

It is suggested that readers collate the two parts as, together, they form a very complete description of a works replanning.—Ed.

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Long-Term POLICY and PLANNING Has Kept This Firm Growing Fast

LONG term planning is the soundest method for building business and profits on a secure and yet expanding basis. But while this is generally recognized there are many thousands of firms whose executives pay only lip service to such policies. Far from planning a year to five years in advance, many heads of businesses do not think a month ahead.

As examples frequently show, in even small businesses it pays to take the long view. A case in point is that of Appleyard of Leeds, Ltd., a prominent car sales and service firm, which 10 years ago was only a sixth of its present size.

Success Through Policies Built on Foresight

Now, there are thousands of small businesses in the car and other trades but there are few that can show such substantial growth as Appleyards. Why? The fundamental answer is: long-term policies. For example: when, 10 years ago, the governing director, Mr. J. E. Appleyard, decided to move to the present site in central Leeds, he did so because he thought far ahead. He foresaw that (a) sale of cars in future would be on a quantity basis and, therefore, would call for big showroom space; (b) service would play a vital part in building up business; (c) premises and plant must be laid out so that sales and service could function in close harmony.

The site chosen had certain qualities likely to be maintained in years to come. It was at a six-roads-end junction, therefore easily reached by motorists and of good advertising value. The wide thoroughfare fronting the premises allowed customers' cars to remain drawn up at the pavement without time restriction.

Adroit Layout Reveals Firm's Service Facilities

Layout and construction of the building took full advantage of these points. For example, facilities for examining and reconditioning used cars were placed immediately at hand. As service was regarded as a vital part of the firm's policy, the repair maintenance and similar departments could all be observed by any customer coming into the showroom. This gave the customer, consciously or unconsciously, evidence of the first-rate facilities that the firm had for giving service. On the other hand, when a motorist came in for service for his car, he could easily be brought into the showroom and interested in a new car at the psychological moment. This arrangement has been particularly valuable in cases where customers are faced with high repair bills on old cars.

From an Interview With

J. E. APPELYARD, B.Sc., M.I.A.E.

Governing Director, Appleyard of Leeds, Ltd.

Another point of importance is that a customer buying a car is immediately made familiar with the service staff. He gets the idea right at the start that he should use the facilities offered. He does not have to go to a separate organization and be introduced to service and personnel again.

These policies and developments have received public response. Within a year the service section, which covered half an acre, was expanded to cover twice that area. In another two years it was doubled in size again and now covers 3½ acres. This is the sort of progress that has been made steadily ever since.

The link-up between sales and service can easily be seen in the physical features of the building. For instance, the only division between the two departments is a plate-glass partition; one department can be seen from the other. And at this divisional line is located the service reception department. Thus casual customers can see both new cars in the showroom and the extensive repairs and maintenance shops.

It is a point of policy that any motorist who comes into either service reception or sales departments shall have immediate attention. To ensure this the floors of executive offices are raised above ground level. Executives can immediately see any caller and ensure he is receiving attention from the appropriate staff.

Just inside the service entrance is the accessories department, a small shop with the spare parts and so on displayed in its windows. This shop has three counters: the first for the private motorist, second for the trade customer, and third for issue of goods to the firm's mechanics.

Spare parts worth £20,000 are stocked by the department. The stock would be much larger but for the fact that three times a week a motor van is sent out to manufacturing centres for further supplies. All stock is carried in tiltracks which stretch from floor to ceiling. Stock-taking is simplified by use of Kardex files in fireproof cabinets. Thus,

yearly stocktaking is unnecessary as a visible control of the stock on hand is present at any time on every day in the year, and is replaced by perpetual check of physical stock and written record.

A good advertising point, in keeping with the firm's policy, is the arrangement of the repairs department which is quite open to the public. Here are eight service bays with enough room for 255 vehicles to be worked on simultaneously. The bays have 10 ft. 6 in. gangways between them. Cars are placed at an angle of 45 degrees so that there is no trouble in driving a car to or from any berth. A system of overhead conveyors is used and mechanics have portable work benches.

Planned Production Methods Give High Efficiency

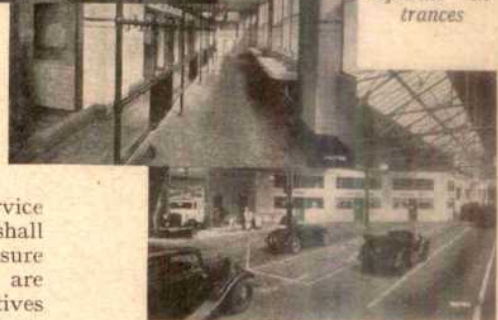
In the handling of cars for any job a good deal of thought has been put into ways and means of speeding up work, thus improving the service. For example: engine parts, etc., are washed by being passed on a conveyor through an enclosed machine which jets out hot alkali fluid upon any surface to be cleaned.



Reception office (top) is between Service dept. and showrooms, giving outlook on both (see text)

Staff comfort is a feature. Here (middle) are mechanics' lavatories, heated coat rails,

shower baths. These shops within a shop (bottom) have separate entrances



Another feature is found in the painting, where heating panels in the cellulose booths are in the form of vertical plates. These roughly correspond to the sides of the vehicle which is being sprayed. Radiant heat from the panels plays directly upon the car. This speeds up the drying process.

There are, of course, numerous specialists shops in the works, covering every motoring need.

Small points which contribute to efficiency include such things as good lighting, which is helped by the fact that half the roofing is of glass and that the walls are coloured yellow and the roofing ironwork is painted light blue. Comfort of staff is also looked after. Employees have mess-rooms, changing-rooms,

shower baths, and special facilities for drying clothes.

The firm also run a profit-sharing scheme which brings their 370 employees in. in the £1 on wages. Holiday pay is given all mechanics as well as the office and executive staff.

These little points all dovetail with the firm's "look ahead" policies. They mean a happy contented staff, working under pleasant conditions and properly equipped to give first-rate service to the



Overhead conveyors (top) speed up work of lifting out engine or transmission units, etc. £20,000 worth of spare parts are stored here (bottom). Tiltracks make stock easy to get at; Kardex system allows daily control of stock

8,000 regular service customers who are now on the firm's books. Indeed, it is on such small points that many firms fail. They do not see, as this company does, that successful policies are concerned with little personal details affecting the staff as well as big, impersonal things such as layout of buildings, efficiency of plant and so on. Policies are given real cohesion and effect by attention to these small details.

Have You a Production Method 'Checker'?

WHILE gradual and steady growth in business is the aim of progressive management there are dangers in this policy. And a big trouble is that these dangers creep in unobtrusively.

A case in point is that of a manufacturer of a well-known household product first put on the market before the War. Throughout the years sales continued to expand, but recently, when the firm was selling bigger volumes than ever before it was noticed that the profit ratio was decreasing as sales went up.

This was discovered by a new executive and he started to investigate. Among many uneconomic practices he disclosed was that of putting several different labels on the bottles. Examination showed that all these labels could be printed in one and, what is more, could be put on by machine.

Another instance of inefficiency was

Planned Factory plus Estate Facilities Solved a Works Site Problem

THE decision to move to a new factory and the choice of the necessary location are problems which the boards of most manufacturers have to face at some time. That is why these two subjects are always of interest to management and why the experience of other executives is worth knowing.

In this respect the move decided upon by the executive of the Royal National Lifeboat Institution is particularly interesting. They are leaving buildings which they have occupied for over 50 years and going to a modern planned factory being built on Laing's Industrial Estate, Elstree.

There are a number of factors that have influenced the move. Chief among them are these: (1) existing buildings and site are inadequate; (2) cost of making the present buildings suitable is disproportionate to results that could be achieved; (3) even if desired, additional ground is not available at the present site; (4) through reorganization, no lifeboat repair work is now done at the factory, therefore there is no need to-day for a dock location; (5) financially, the move is a sound investment.

Like so many firms, the Institution has been working in an obsolete building. When first established, the works was a central store and carried out repairs to damaged boats, etc. As the lifeboat service grew and a policy of centralization was followed, the work at the depot and workshops at Poplar expanded. Factory work, in particular, became of major importance.

The development of motor lifeboats accounts for the growth of factory work. Larger and more modern workshops and

machines have become necessary for manufacture, repair and testing of boat engine parts as well as for equipment, rigging and so on.

Handling the publicity side is also a big job. For instance, 35,000 collecting boxes in the form of lifeboats must be kept painted or enamelled, checked and controlled in despatch to, and return from, collectors. There is, too, the sorting, checking, storing and control of 9,000,000 paper emblems used each year on lifeboat flag days.

While the systems of control of all production processes, movement of stores and materials, etc., are adequate, the physical features of the present buildings put obstacles in the way of efficiency. As work has grown, improvised solutions to the problems that arose have been made, a case typical of so many firms.

The executive looked for a site which could give them these advantages: (1) adequate transport facilities; (2) a clean, fresh-air location; (3) low rates; (4) room for expansion; (5) a central point in relation to London; (6) facilities for moving their staff to the new locality.

Elstree Estate Provided All Facilities Demanded

After investigation of several factory estates, they decided that Laing's Elstree estate met their needs in every respect. In addition, the 1½ acre site they obtained fronted a main highway and, therefore, had good advertising value.

An interesting point is that through recent reorganization it is no longer necessary for the factory to be on the Thames. Lifeboats are now repaired at their coastal stations and the reserve fleet of boats, which was kept at Poplar, is now distributed at strategic points around the coast. Thus, the efficiency of the service is increased while costs have been lowered.

Work has already started on the factory. The building is planned for "flow" production; heating, lighting and other factors have been carefully studied. Works, stores, and publicity departments will now be arranged in highly organized units, an impossibility in the old building. Although the increase in work is not likely to be on the scale of the last decade (when some types of work rose in volume by over 100 per cent) there is ample allowance for future development.

Attention has been paid to staff comfort. Canteens and recreation-rooms are being provided. Special lighting for each type of work is being installed. Heating will be adjustable to changing conditions and so on. All members of the existing staff will move out to Elstree with the concern.

TEMPERATURE CONTROL *by* MAGNETIC VALVES

In office



or factory



**is an essential factor of
EFFICIENCY**

★ Write for the book "Temperature Control for all purposes."

THE MAGNETIC VALVE CO. LTD

BUSH HOUSE W.C.2: PHONE-TEMPLE BAR 7777



*Were off to
Studd & Millington's
Sale*

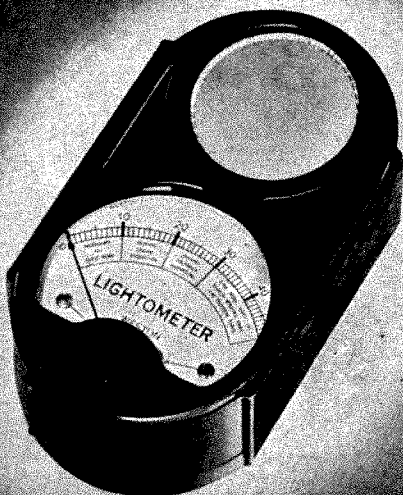
FOR LADIES and GENTLEMEN

If dressing well and the acquisition of bargains interests you, then you shouldn't miss this opportunity to replenish your wardrobe. Amongst the wide selection of Overcoats—so much reduced—you will be able to match quality with an economically attractive price. The Studdington high standard of Style, Materials and Tailoring, for which they are justifiably famous, remains unchanged, only the prices are reduced. **THE SALE STARTS MONDAY, JANUARY 2nd, ONWARDS. IT'S A DATE . . . TO REMEMBER.**

STUDD AND MILLINGTON LIMITED

25, SAVILE ROW, W.1.
67-69, CHANCERY LANE, LONDON, W.C.2.

***An ideal
Light Meter for the
Factories Act 1937***



You need an accurate and reliable light meter to assist you to meet the lighting requirements of the Factories Act 1937. The Weston Model E703 Lightometer is an ideal instrument for making rapid checks of interior illumination. It is as easy to read as a watch, its scale being marked both in Foot Candles and with the correct lighting values needed for various locations and types of work. Inexpensive and pocket-size, this instrument will last a lifetime. It is supplied to give readings of 0.50/0.500 F.C. or alternatively 0.50/0.250 F.C. Please ask us for details.

WESTON
MODEL E703
LIGHTOMETER

WESTON ELECTRICAL INSTRUMENT CO. LTD.,
CAMBRIDGE ROAD, ENFIELD, MIDDLESEX.

'Phone: Enfield 3434 (Six lines)

'Grams: Pivoted, Enfield.

These 'Cold' Facts Are 'Hot' News

Up-to-Date Air Warming Increases Efficiency Reduces Labour and Costs

IN almost every office and factory the problem of heating for one reason or another affects efficiency. Cold draught, for instance, destroys concentration while excessive warmth tends to blur the mind. Constant opening and closing of windows to reach a comfortable balance between the two is frequently a source of controversy and waste of time and energy.

Recently, there has been a tendency to favour convection type heaters. Their many unique advantages for use in offices and works are being recognized.

The distinction between convectors and radiators is that *the former convey their heat to the air, the latter to objects in the path of their rays*. Air warming has distinct advantages, such as: (a) prevention of draughts; (b) even distribution of warm air; (c) absence of intense local heat; (d) elimination of wall-blackening; (e) ease and efficiency of thermostat control, with consequent economy in running costs.

Hindrance in the past to development of convection heaters has been bulky construction. This has been overcome in the *Thermovent*, made by E. K. Cole,

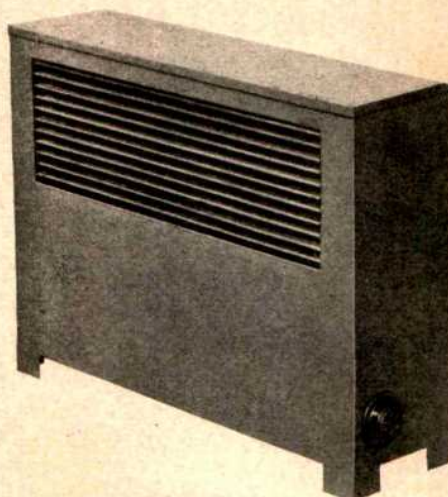
instead of varying in intensity according to the distance or direction of the heater. Two feet or twelve feet away, the warmth is the same. Desks and machinery can be placed in almost immediate proximity of the heater without affecting efficiency of heat distribution or comfort of employees.

No Fire Risks With The Enclosed Element

Safety is another important feature. As the element is enclosed within the ducts, fabrics placed even in close contact with the grilles cannot scorch or char; even if the heater falls face downwards on an office carpet it can do no harm.

Individual thermostats, where fitted, are fixed in the incoming cool air-stream. Thus they give exact and immediate reaction to air temperature in the space being heated. There are no inaccuracies owing to effect of such incidental influences as sunlight, cold draughts, or rays from a radiant heater. Current saving given by thermostat control can amount to as much as 50 per cent.

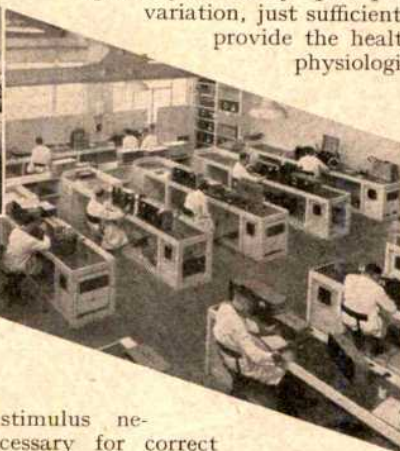
A differential type of thermostat which cuts in at a temperature approximately 3° to 6°F. below that at which it cuts out, has been standardized. This gives regular yet hardly perceptible variation, just sufficient to provide the healthy physiological



This steel-cased heater has been specially designed for factory and general office use. The built-in thermostat control is standardized. There is no waste in operation of this machine which automatically cuts out when the temperature figure set on the thermostat is reached



For office, factory, reception room or any business premises, this convector-type heater is inconspicuous but effective. In the reception-room and the factory shown here the Thermovent is used to maintain comfort-level temperature at low cost



Ltd., Southend-on-Sea, by incorporation of an ingenious system of ducts, one inside another. The inner duct provides the main air stream, the outer duct insulates the casing from the black heat element.

Distributed Heat Means Efficient Labour Conditions

As a result of this construction, the casing remains cool, yet the heater is no larger than an equivalent radiator.

This duct system ensures 100 per cent convection. Heat is evenly distributed

stimulus necessary for correct functioning of the human body. Considerable research by various authorities has shown that maintenance of a dead level of temperature causes lassitude, enervation and fatigue and is against working efficiency.

Apart from low capital outlay—approximately half that of a coal, gas, oil or steam system—there are other advantages in using a *Thermovent*. Elimination of boiler plant, for example, housing of pipe lines, fuel supply, storage and ash disposal. Only space for switch gear, meters, etc., is needed. No labour is required except for occasional check-

ing, maintenance charges are negligible. The element construction gives long life; replacement elements are inexpensive.

Re-decoration costs are limited to ordinary wear and tear as the heater eliminates wall-blackening.

Banishing That Monday Morning Chill

Running costs are involved only when heaters are actually used.

This is important when dealing with occasional cold spells and for reaching "comfort level" after week-ends. Furthermore, when overtime is worked those sections of the building used can be independently heated. In board-rooms or offices in which heating is required only occasionally, the heater has special advantages. It also meets industrial needs for maintenance of a set temperature as, for example, in meter testing, precision instrument manufacturing, etc. It is also suitable for drying chambers in conjunction with suitable fans, etc.

"Boosting" For Plenum And Other Systems

The heaters are now used in conjunction with other heating systems. Where open fires or radiators are the principal heating system, *Thermovent* is installed as a "background" heater, usually with thermostat-control to balance out the variations. It is also suited for "boosting" Plenum and hot-air systems either at the end of a long run or for increased local temperatures.

Cut Delivery Costs By 18 per cent

THE problem of deliveries from factory to customer is one which would pay many manufacturers to investigate. In recent years the trend has been for distribution costs to rise out of all proportion to other costs because of the demand for frequent deliveries of small quantities of goods. Indeed, in some cases manufacturers are finding it not worthwhile to do business on this basis.

A good instance is that of a small biscuit manufacturer in the Midlands who has recently overhauled his delivery system and cut costs by more than 18 per cent. He found, for example, that one of his vans made weekly a 7-mile trip to supply a small retailer with one or two tins of biscuits. The costs of getting and delivering orders in this case resulted in a direct loss.

Restrictions On Deliveries Way To Economize

There was no reason why the retailer concerned could not order a month's supply. This arrangement has now been made. Similar restrictions on deliveries have been made in about 225 other instances; routes have been re-planned and new time schedules set for the delivery vans.

The example quoted is extreme, but there are thousands which are almost as bad. While enterprising manufacturers want to do business with these accounts, that business must stand the test of "profit or loss," therefore delivery costs must be economic.

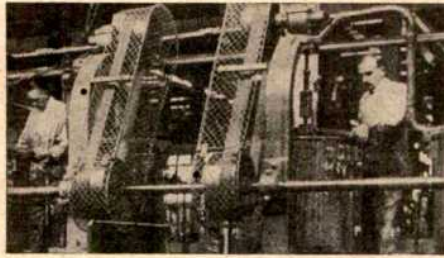
Why not test your delivery system and see if individual costs are economic? This may show you a new place where you can plug profit leaks. In any case, a check of this nature should be part of your routine.

This Packing Idea Cut Costs By More Than 10 Per Cent

MANY firms could save time, labour, and money in the packing department by revision of present packing methods. For instance, a firm manufacturing a bottled product has recently cut costs by over 10 per cent through use of a corrugated cardboard type of packing in place of the straw and wooden box method.

The change was the outcome of experiments with modern manufactured packing cartons. They found that the new method, while reducing the time taken by each girl to pack a case, also cut down the percentage of breakages.

. . . making actual contact with machinery a physical impossibility



Factory machinery must now be guarded to make actual contact with it physically impossible. This legal obligation can now be economically achieved by the use of Procter's Wireguards.

Procter's are specialists of many years' standing in making machine-guarding equipment to the individual needs of hundreds of industries. We are thus able to plan installations on the most economical basis—fulfilling Home Office regulations to the letter and at the same time avoiding waste of floor-space that might be used productively.

Procter Bros. (WIREWORKS) Ltd.
CALL LANE · LEEDS

New Welding Technique

Makes a
Stronger
Job



Welding a steel main bearing housing into a cast iron crankcase; a new Barimar process that has wide possibilities because the merits and advantages of these two metals can be combined without resorting to mechanical joints, which are frequent causes of failures. In the foreground is the cast iron housing that has been broken out and alongside is the new steel housing ready to be welded into place

tages of these two metals can be combined without resorting to mechanical joints, which are frequent causes of failures. In the foreground is the cast iron housing that has been broken out and alongside is the new steel housing ready to be welded into place

FOR the average job the best performer is at least three times—sometimes four times—better than a "poor average" performer.

Obviously it pays to take trouble to select the best. But too often one still sees important jobs in the hands of the "poor average" or just "average."

10% Extra Productiveness for your Salesmen!

Do you make it easier for your salesmen to obtain interviews by sending prospective customers attention-getting literature prior to their calls?

Arresting, persuasive sales literature can pave the way for representatives by arousing interest in the features of your product. When your salesmen call, the buyers will more readily grant them interviews and give the proposition careful attention.

Before issuing your next piece of sales literature, ask for our suggestions. See if we can't give a new twist to the sales angle that will make buyers eager to know more about your product.

J. W. RUDDOCK & SONS

Printers and Advertising Consultants,

LINCOLN

and at 3 Old Jewry, LONDON, E.C.2

Sales Plans To-day Must Keep Pace With The Changing Markets

MOST successful firms to-day carry out market research so that they can plan sales campaigns, advertising and distribution. But research is costly in time, labour and money. Except for large manufacturers and businesses interested in the national market, individual firms have neither resources nor organization to gather anything like complete information about every section of the country. Moreover, the economic and social change in Britain is set at a pace to-day that calls for constant survey in order to keep facts up-to-date.

That is why the new *Marketing Survey of the United Kingdom* (Business Publications, Ltd., 50s. net) is a work of major importance. It is packed with vital statistics and market information that every business executive should have on hand. Sales managers and marketing executives, in particular, will find here revealed not only the major changes which have taken place in the British market in the past 12 months but detailed information about all the main markets in the country.

Aid To Setting Your New Sales Quotas

The past year provides a good example of how quickly Britain is changing. What, would you think, is the difference, if any, between the average wage from 1930 to 1936 and to-day? The answer is 5s. 2d., the average having risen from 50s. to 55s. 2d. Again, has there been any noticeable change in purchasing power of 110 principal cities and towns in Britain? Yes: 43 centres in the past year have increased their purchasing power.

It is data of this type that the *Marketing Survey* gives in abundance, data that every "live" executive should have at his finger-tips when he is planning sales campaigns.

Perhaps I can best give an idea of the value of the new *Survey* by quoting the Rt. Hon. L. S. Amery, P.C., M.P., president, Incorporated Society of British Advertisers, who writes in the preface: "... How valuable then for the marketing executive is everything that can throw light on the conditions of this fast-changing Britain. Here in this volume are brought together practically all the figures that matter whether derived from government departments, from civic authorities or from private sources. Only a little easy quarrying is necessary to turn those significant figures to your own account."

The book is divided into nine sections: (1) marketing trends, an examination of significant factors that affect selling on a national scale; (2) the *Purchasing Power Index* which

says

A. H. WILLIAMS

Chairman,

Williams Enterprises Ltd.

reveals the prosperity level of all big cities and towns; (3) survey of the national market by county or county-group; (4) Greater London and London largest market survey; (5) survey of provincial markets; (6) survey of 116 largest provincial markets; (7) survey of county markets; (8) surveys of motor and food industries; (9) directories of marketing and services and supplies.

Now these nine sections comprise a formidable amount of information. On the whole I must say that the job has been handled well. The masses of information are given in easily readable and extractable form. A junior member of the staff could select the facts needed, which is praise indeed for a work of this nature.

A section that particularly interested me is that dealing with marketing trends. Here are a series of articles contributed by accepted authorities on the specific subjects discussed. Take the article by Colin Clark, M.A.: "How Will The National Income Affect Selling?"

How many business men know, I wonder, that after the record national income of £5,750,000,000 in 1937 it remained at the same level in 1938, and that this year it is likely to decline? Mr. Clark says: "The period of rising national income, which has been the background of all business since 1932, is now definitely at an end."

Guide In Business Management in 1939

These figures and this opinion, coming from a man of Mr. Clark's standing, must command widespread respect and attention. And they provide a guide to management in framing 1939 policies. So does Mr. Clark's analysis of how the national income is spent. Less, for example, is being spent on food. Even if entertainment is included in retail trade, only 50.6 per cent of income is now spent "over the counter," a decline from 54.6 per cent in 1929. About 2s. in the £ goes in rent, rates, gas and electricity; about 4s. in the £ is spent on travel, domestic, hotel or similar service; taxes take 2s. in the £, while savings absorb a trifle less.

The detailed analysis of these figures should provide many executives with a sound basis for planning the future of their businesses.



Another analytical article deals with the new arms programme and its effects in redistributing purchasing power. In it Oliver W. Roskill, industrial consultant, shows how the £351,700,000 spent or to be spent during 1938-39 has been allocated and where.

Here's Data Needed For Market Research

An examination of the analyses in the surveys of the various markets suggests that in these sections executives will find all the important data needed for sound market research. In the masses of statistics produced no doubt there are errors; that is almost a certainty in a work of this size and scope. But as the bulk of the figures are taken from official sources it is reasonable to assume that they are accurate in the main.

There are, of course, a few criticisms which most intelligent readers and users of the volume will make. The most serious of these concerns the survey of the food industry. For example, the "analysis" of retailers and importers of food products tells little. It merely gives total numbers of such retailers in the chief centres.

To be of value to business men I suggest it should analyse the types of retailers—grocers, dairymen, department stores, etc.—and, if possible, further break them down into A, B, C classes and so on.

The editor of the *Marketing Survey* invites suggestions. I am sure he will get many, but that is a measure of the value and importance of the work. Another suggestion I would make is, for example, that he gives percentage as well as figure readings of the various classes of families in the markets surveyed. Both are valuable, the percentage to show relative prosperity and the figure to show actual purchasing power.

As the head of a business, however, I must say I welcome the new *Survey*. It is a contribution to scientific marketing in this country, a practical help that every executive on the sales side at least should have on his desk, and a means of short-cutting labour, time and cost in market research.

THE HOME MARKETS

A Survey and Index of Regional Business Activity

JANUARY, 1939

**“... five times as much ‘Pull per Pound Expended’
when compared with other advertising methods”**

says Mr. Alfred Nuttall, Boot and Clothing Merchant, Ilford.

“... about the same time, your Maseeley representative was demonstrating to me, the value of attractive descriptive tickets, to take the place of the old-fashioned price tickets.

“Rather timidly, I decided to instal a speedier machine with mass colour dies and press, etc., in order to produce these improved tickets and showcards. The results have more than justified the outlay, and I no longer regard ‘Tickets’ as an item of non-productive expense. Instead, they have become a valuable form of advertising, and my turnover has steadily increased.

“I would estimate that ‘Advertising at the Point of Sale’ will produce something like five times as much ‘Pull per Pound Expended’, when compared with other advertising methods. (I refer to Circulars, Press adverts, Cinema Slides and Posters on distant sites.)”

Any Advertising scheme, however brilliant, that does not carry its message right to the shop window and to the shop counter is making only part of the journey, and may well be sidetracked before the goal is reached.

The MASSEELEY
Sales Promotional Unit
takes your Sales promotion
ALL THE WAY

For full particulars, call, write or phone—

MASSON SEELEY & CO. LTD

Maseeley Building, Howick Place, S.W.1
VICtoria 2151 (4 lines)

THE TREND OF TRADE

1939 Should Offer Us Better Possibilities

THE Old Year has ended as it began, with new political anxieties overshadowing excellent business results.

Italy's unofficial claim to Tunis!

Corsica! Nice! was taken surprisingly seriously. Obviously a mere strategic staking of claims to counter Germany's declared intentions in the Near East and North Africa, it caused quite a

By

Cecil Chisholm, M.A.



flurry on the Stock Exchange. Innocently, business men have mistaken Throgmorton Street's political simplicity for an "inside tip." When will business men begin to realize that the brokers are probably the worst judges of the weight of political moves in the whole country?

Revolt Comes To Downing Street

THIS political flurry abroad was followed by a political flurry at home. The revolt of certain junior ministers against government inaction in rearmament has been brewing for a long time. The failure to institute the Ministry of Supply made it inevitable. Unfortunately it stresses the anxiety as to poor progress with armaments felt, as I pointed out last month, in all informed business circles.

The publication of the names of a Committee to advise on expediting rearmament is anything but reassuring. Obviously the five company chairmen chosen along with an F.B.I. president can only spare a margin of their time to this job. Yet the job is the planning, contracting, co-ordination, and production of the biggest rearmament programme ever attempted in this country in peace-time. This is a job for full-time executives with no other responsibilities.

I shall be surprised if the Premier's panel long survives the proposed reconstruction of the Ministry. For the more realistic younger ministers with experience of the last war are striving against just this nervous and inadequate approach to an immense problem.

Business Barometer Now Reads 'Steady'

THESE political unrests are unnecessarily damaging, especially as business news of the past month is most encouraging. More surprising still, business has been stable now for upwards of six months, a reassuring phenomenon.

The various trade figures for November have improved for the third month in succession. The adverse balance of trade is being considerably reduced under recent conditions of contracting trade and the danger of sterling falling below a reasonable level is no longer serious.

The fall in employment is largely seasonable. It is much smaller than last November's heavy decline and shows the cotton industry improving a little.

The 'Little Man' Is Cheerful Again

THE cost of living, too, remains stable—4 points below last year's level. Retail sales rose by 2 per cent in October, and my reports of the Christmas trade are reasonably good. Even politics failed to check the returning confidence of the "little man."

All these are auguries for 1939, but further political trouble may prevent improvement during the next three months. That the improvement can only be slight is certain, yet it does show we have reached the bottom of the dangerous recession. Our armament, cheap money and great building activity have quite rapidly countered what looked like a considerable downswing in the trade cycle. This is a good deal more than most of us hoped for a year ago.

Everything conspires to focus attention on foreign trade. The November figures show that we are again holding our own despite high costs of production. On the other hand, reduction in the adverse balance is no unmixed blessing. The mere fact of reduced imports from raw material-producing countries this year means a decrease in exports to these countries next year.

Germany To 'Go Gunning' For Bigger Export Trade

THE condition of Germany's export trade, after a long effort of self-sufficiency, is another evidence of how interdependent are exports and imports. It is now evident that a revival of exports is one great aim, if not a predominating aim, of the Reich Government for 1939. Germany means business with a vengeance. There is evidence that even the military requirements are to be placed second to export orders by business leaders this year. The German firms doing export business will have prior consideration in the allocation of Government contracts.

These are far-reaching changes of policy which indicate a drive for exports on an unprecedented scale. Already Bradford business men tell us that Germany has "succeeded in interpreting direct trade between Britain and Bulgaria and interposing herself as middleman between the two." Dr. Funk is mainly concerned with Czechoslovakia, Yugoslavia, Bulgaria, Turkey and Greece, but there is every evidence that he intends to push the drive rapidly towards the Near East, one of

Reading the Indices

For these new indices the average business activity in each area during 1933 is taken as the base (=100). The indices are given by months.



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our most important foreign export fields. This is evidenced by the proposed exchange of official visits between Germany and Iran and talks with Egypt.

Britain To Use Heavy Finance In Trade War

IT is true that our total trade with Eastern Europe amounts to a little more than our trade with Eire, but our trade with the Near East is much more considerable. Clearly tariff arrangements under the "most favoured nation" clause will not help against Germany's economic weapon.

Fortunately, the Export Credits Guarantee Department is going to help. Recent moves include the decision to raise the total of the department's guarantees at any one time from £50,000,000 to £75,000,000 and to insure re-exports as well as British goods. The setting aside of a new fund of £10,000,000 for the further assistance of foreign trade through the Board of Trade is another aid. In fact, a National Fighting Fund has been constituted, and we are going to fight for our foreign markets with all the weapons available and without loss of time.

Prices, Costs Form Crux Of Troubles

HERE, of course, the crux is prices, which in turn depend upon our costs of production. Freights are al-

ready low enough, but the rigidity of our wages and price structure remains a bugbear. For many of the raw material-producing industries are still charging too much for their goods.

The reduction in steel prices is some-

For News About The New Marketing Survey of the United Kingdom

turn to The Review
page 44

thing, but have they fallen far enough? The range of industries affected by steel is important. It accounts for 11.2 per cent of total value of output in shipbuilding, 16 per cent of mechanical engineering products, 15.9 per cent of cars and cycles, 22 per cent of hardware and holloware, 37 per cent of wire, 33.1 per cent of chains, nails and screws, 18.7 per cent of tools and implements, 21.9 per cent of railway carriage and wagon building.

Steel Magnates Still Keeping Prices High

THE head of Tube Investment, Ltd., himself an owner of a big steel mill, says that the reductions are *about half what they should be!* If this is so the effect on shipbuilding in its

present plight can easily be imagined.

Cammell Laird, says their managing director, have had one small civil order in the last twelve months. Roughly speaking, the number of workers in the shipyards has been halved since 1918. Here is a case where the semi-monopoly of steel may seriously affect our export possibilities.

Cotton Industry Lose 'Thread' Of Progress

AT the other extreme is the cotton industry, still largely unorganized, still far from efficiently equipped. Master weavers have actually admitted that it is impossible for them to guarantee a 35s. weekly wage for their workers for a full working week of 48 hours. This condition equally makes for high costs through the inability of so many weavers and spinners to re-equip.

So far as cotton is concerned we shall have to look to the Anglo-American Trade Agreement, the new agreements with France and Egypt, etc., to mitigate the situation.

The revised Enabling Bill, another favourable factor, makes demands which will avoid monopoly prices. It will enforce reorganization and some re-equipment. The real question is whether it will still leave the cotton firms the possibility of making a profit.

Probably this situation will be healthier for the industry in the long run than a tariff for permitted price rigidity.

Despite the generally admitted difficult trading conditions of the last two years, we succeeded in increasing our turnover in 1937 by no less than 25%. During 1938, though the international situation threatened to dislocate business, our 1937 turnover was exceeded in the first nine months. This increase has been obtained by the only forms of salesmanship that carry weight with business people... service and quality that are high, consistently maintained and constantly improved, and a keen spirit of progress which finds new ways of doing things better and stops at nothing to help you out of a difficulty. We are confident that during 1939 this policy will meet with even greater success.

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Pointers Now Indicate 'Spring' For Business

KEEPING in view the many promising features and the many menacing factors in the present situation, what are the prospects for 1939? I think that we may hope for a very slight improvement until the spring if we avoid further political disturbance.

If the market revival persists at the present pace a general improvement should be possible by the autumn. Perhaps the best feature with the whole situation is the magnitude of this market revival. Car output has reached over 100,000 per week, steel production at around 57.6 per cent (which is more than twice that of a year ago), and the seasonal slacking for Christmas is just about normal. It certainly seems as if the long-awaited market revival is here in real earnest.

Here's Encouragement For New Market Plans

OTHER factors in our favour are the stability of home trade, continued elasticity of foreign demand, the strength of the restocking movement, the cut in steel prices, the new help

Constructive Planning that Builds Up Business

See page 9

for exporters, the Government's suggestion that income-tax will be little increased, if at all, and the high level of building activity—truly a formidable array of favourable symptoms.

Against this are, of course, political uneasiness, our high costs of production, and extent of rearmament which must be met from the earnings of industry. The continued slump in ship-building, cotton and coal, the tax on imports and the weakening of raw material prices on freights are other unfavourable factors.

Weighing up the opposing forces, it seems reasonable to conclude conditions are in our favour. Better still, they are strong enough to offset the downward trend of the trade cycle.

European Conditions More In Our Favour

WHEN we turn to Europe the situation is a trifle more satisfactory. Totalitarianism is driving Germany and Italy to desperate expedients in the export markets.

As I predicted, M. Daladier has won the day in France. M. Reynaud's far-sighted policy for opening up trade and increasing opportunities for the average business has been approved. I will be surprised if the policy does not produce results in a relatively short time.

Clearly 1939 will not be an easy year. It may prove to be a very difficult one. But on the whole the

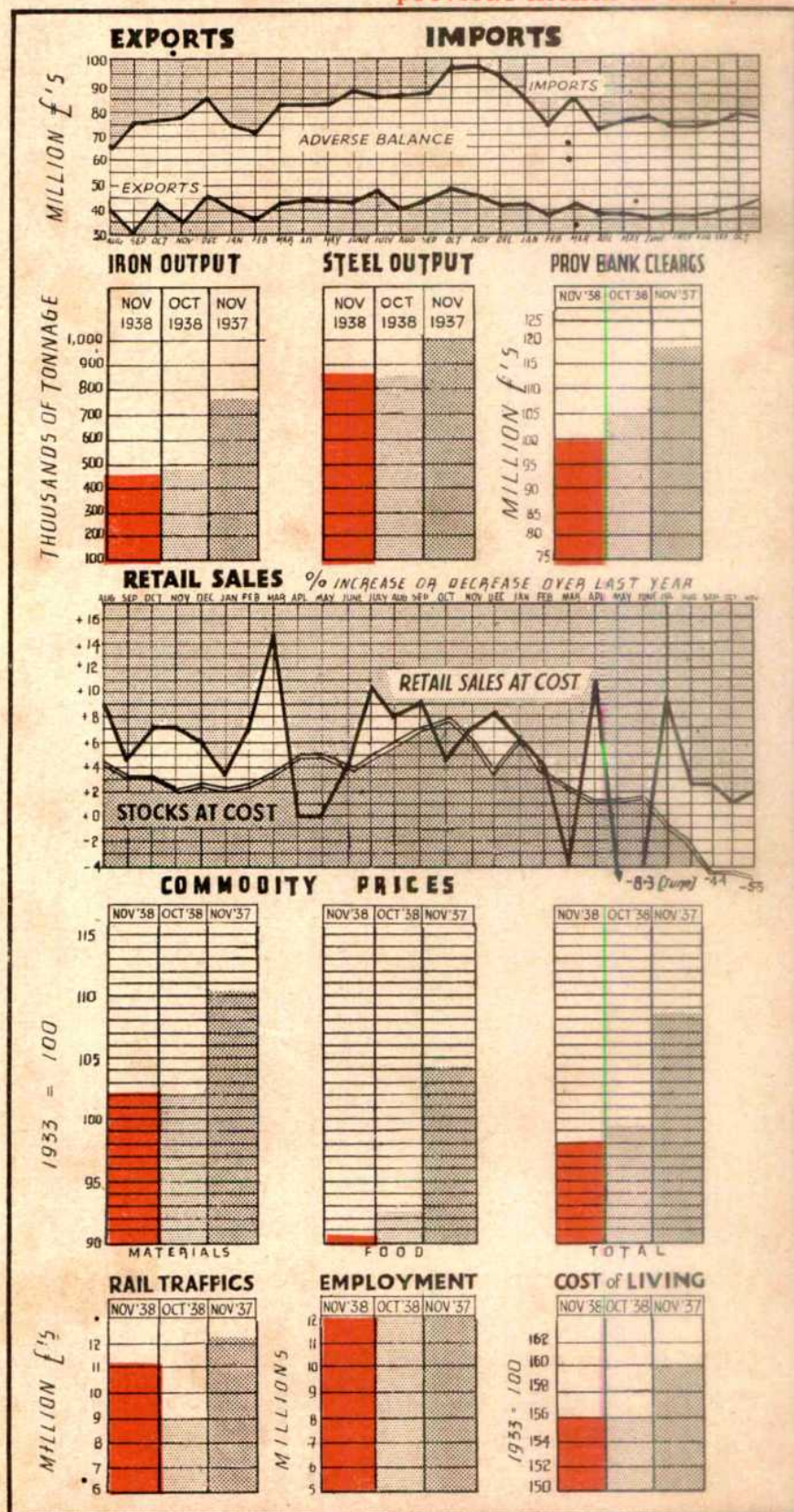
indications are that the first six months should be a little easier than the last six months of 1938. Indeed there is every possibility of genuine gains for business during the second half of 1939. Such success, however,

depends on costs kept down to the minimum, coupled with extensive and resourceful selling both at home and abroad.

May it be a happier year than 1938 for all our readers.

GUIDING FACTORS IN THE TREND—

All comparisons are with similar month in last and previous month in this year



Here's *NEWS* of Active Home Markets

North-East Shipyards output in past 12 months has been 23 vessels from Tyne-side, 30 from Wear-side; ship repair work has been fairly active—Parsons & Co., Ltd., Newcastle, have shipped 250 tons of machinery to Sydney, Australia, for use by city fire brigade—New £20,000 cinema is to be built at Jarrow, recently looked upon as one of Britain's most depressed centres.

About 120 Tenants are now operating in factories owned by North-East Trading Estates Ltd., Gateshead-on-Tyne; newcomers include Darlington Engineering Co.; Consolidated Pneumatic Tool Co.; Double Seal Ring Co.; Lawson Beck, Ltd., manufacturers of cartridge-type fuses of new design—Tyne Improvement Commission have let a contract for clearing a derelict site at Jarrow; it is hoped to erect factories there—Young (Motors), Ltd., have opened one of the largest tyre-soling plants in Britain at Newcastle—The Hartlepool local authorities have earmarked a 45-acre site for development as a small trading estate—Employing about 100 persons, a toy-making factory has been opened at Hartlepool.

Around £500,000 worth of motors equipment is to be supplied by Lancashire Dynamo & Crypto Co., Manchester, to the Swift Canadian Co., Winnipeg—Believed to be the largest single order in Britain for coal-washing plant, the Chinese Engineering & Mining Co., London, have placed a contract with Simon Carves, Ltd., Cheadle Heath, for a complete coal washery to deal with 500 tons of coal per hour; about 2,000 tons of steelwork and machinery will

be shipped to China—Greengate & Irwell Rubber Co., Ltd., rubber garment manufacturers, have opened a factory in Manchester—About 150 workers will be employed in foot appliance production at a former cotton mill at Blackburn.

Four thousand persons will be employed at the new Rolls-Royce aeroplane engine factory at Crewe—About £500,000 is to be spent enlarging The Fairey Aviation Co.'s plant at Heaton Chapel, Manchester—Nearly 3,000 persons will be employed at a new aircraft assembly works being built at Preston—Some hundreds of men will be given work at the Air Ministry's maintenance unit being established at Heywood.

£2,000,000 more is to be spent on the munitions factory now being built at Chorley; already £6,000,000 has been spent; construction work is being carried out by a local firm, Sir Lindsay Parkinson & Co., Ltd., Blackpool—Gerrard & Sons, Ltd., Swinton, have contracts worth £150,000 for building a training centre for young aircraftsmen at Warrington—Crossley Motors, Ltd., and Leyland Motors, Ltd., have both received contracts for various types of vehicles by the War Office; Leyland's contract is worth more than £100,000—Lewis's, Ltd., Manchester's biggest retail stores, are spending £100,000 on a six-story extension to the present building in Market Street.

More than £440,000 has been spent in extensions to their Longbridge factory during the past year by Austin Motor Co., Birmingham—At cost of £48,000 Birmingham

ham is to have an underground car park which is also an air raid shelter; it will accommodate 260 cars—The Triumph Co., Coventry, are to produce aero engine and undercarriage parts; work will be given about 300 persons—Wolseley Motors, Ltd., Birmingham, have produced a new and ingenious system of interior lighting for their large cars; interior lights illuminate immediately either rear door is opened and are extinguished when either door is closed.

Two Small Trading estates are being established in Lanarkshire, one at Carfin, the other at Larkhall. Six blocks of buildings are to be built at Carfin, three at Larkhall. The development is undertaken by Industrial Estates, Ltd., a body set up by the Commissioner for the Scottish Special Areas—A factory for weaving and waterproofing heavy canvas has been opened by Wallach & Baumann, Ltd., Dundee—Hiram Walker & Sons (Scotland), Ltd., have opened a new distillery.

A Sheffield Firm, Spear & Jackson, Ltd., have invented a new type of tooth for saws which gives a big increase in efficiency—Edgar Allen & Co., Ltd., Sheffield, have installed a sand reclaiming plant capable of dealing with over 200 tons a week—Road studs carrying a reflector prism are now being manufactured in Sheffield—British Ropes, Ltd., Doncaster, are transferring factory, plant and staff from Wakefield to Doncaster; all 350 employees will move with the firm—Lincolnshire Food Products, Ltd., a new firm manufacturing cereal foods, are shortly opening a plant at Scunthorpe, Lincs.

Force —or

THE people looked out from the walls and saw the hosts of Greece had departed, leaving behind a huge wooden horse. They dragged it into the city, and made merry all day and far into the night, rejoicing at the raising of the siege. When at last all was still the invisible door in the side of the horse opened, and out crept the handful of Greeks who had been hiding in its hollow belly. Silently they opened the gates, and the Greek army, which had returned under the



Strategy?

shadow of darkness, entered the City of Troy . . .

THE Greeks did by strategy what they could not do by force. To-day's most successful advertisers realize that force alone in advertising is not enough. Its efforts are as futile against the walls of apathy as were the Greek assaults on the walls of Troy. The successful advertiser knows it is clever marketing strategy that enables him to get inside the human guard of self-preserving sales-resistance.

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Marketing TRENDS

By the MARKETING EDITOR

Planned Marketing Is 'Open Sesame' To Sales

HOW many orders have your salesmen lost because they did not call at the right time, did not know a prospect was "ripe" to buy or did not even know such a prospect existed? Probably you do not know: possibly you can guess.

But cause of lost orders can usually be known. Sometimes it is bad organization, lack of *planned* selling; sometimes it is the salesmen's fault; sometimes it is the fault of the goods, the prices or other terms. And 75 per cent of these losses can be turned into gains by right policy and management.

'Little Men' Can't Win Overseas Trade

NOW think along these lines with regard to export and not merely home markets. In these faults is found one reason why Britain's overseas trade is more than 10 per cent down this, as compared with last year, why the volume is below that of 1929. *Bad organization and lack of planned selling in export spheres is chiefly to blame.*

Proof? It comes from special reports from overseas officers of the Depart-

ment of Overseas Trade. Referring to these reports, the Rt. Hon. R. S. Hudson, M.P., recently said: "One thing that struck me forcibly in considering them (the reports) is that, while no single remedy would ensure a prosperous trade overseas, it is clear that well-organized industries are far better equipped to deal with the many problems which have to be overcome."

'Herd Policy' Ousts Lone Wolf Practice

BASED on facts, points made by Mr. Hudson include: (1) world market conditions to-day are completely different from days when individual enterprise could expand business successfully; (2) competition now comes from *organized industries* and, in some instances, from *nations* industrially organized to get the trade; (3) economic nationalism not only means quotas, tariffs, etc., but *nation-wide organization of resources* for competition; (4) reliance on virtues of quality and workmanship is not enough against smartly turned-out goods selling at low prices, therefore small concerns cannot meet adequately this fierce competition; (6) the solution is for firms in each industry to organize themselves so that (a) they can negotiate on equal footing

with foreign competitors, (b) not compete foolishly against themselves.

Organize Co-operation: It's In Your Interests

HOW can you help? By supporting a move to organize your industry with export trade development in view. Even if you think you cannot or do not want to enter overseas markets yourself, support for such a movement serves your interests in the long term. For "home market" manufacturers get, in the final analysis, their imported raw materials because of export trade and overseas investment of capital.

If no such move to organize exists now in your industry, you can be one of the initiators. Talk it over with other executives in your industry. Spread the idea around. Arrange meetings for discussion; get support and help from other industrial organizations. Federation of British Industries is in favour of the general scheme; Department of Overseas Trade is anxious to help; Institute of Export (an association of export executives) will give benefit of its members' wide experience and knowledge; Export Credits Guarantee Department is there to help financially.

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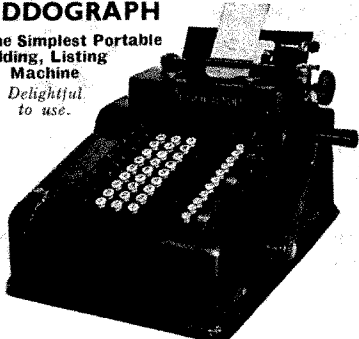
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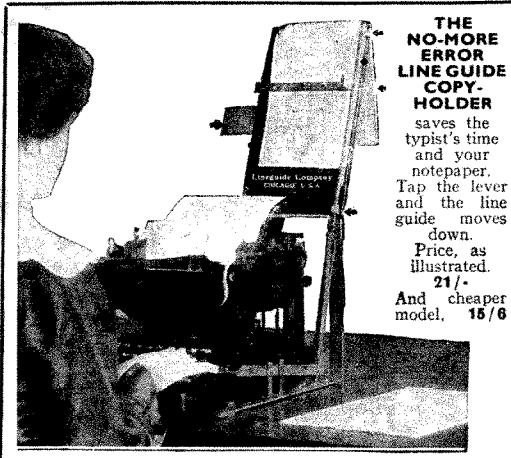
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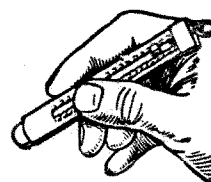
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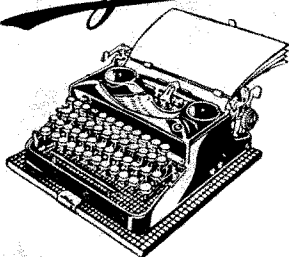
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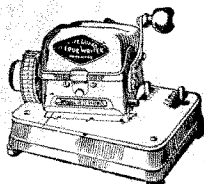
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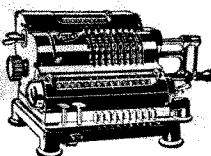
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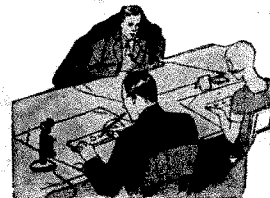
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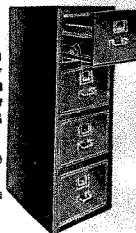
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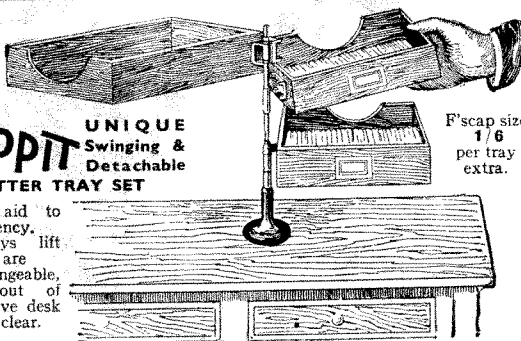
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Miss Margaret Lane, in her recent biography, tells some remarkable stories of the speed at which Wallace worked and of the way he could drive himself to the point of complete exhaustion when he had in hand some job that was urgently needed. One of the best is her account of how Wallace produced his novel *The Devil Man*, which was founded on the life of Charles Peace, the infamous burglar and murderer.

Sir Patrick Hastings, Miss Lane says, had been spending a week at Wallace's country house and had seen him dictate a full-length novel, *The Devil Man*, between Friday night and Monday morning, and had been aghast at Edgar's airy assurance that the feat was nothing extraordinary.

Edgar had disappeared during dinner on Friday night and "Jim" has explained to the guests that he was worrying over the beginning of a serial. During the night, Sir Patrick, who was sleeping badly, had got up and gone to Edgar's study, where he found him sitting at his desk in a dungaree suit and dressing-gown, Dictaphone mouthpiece in hand and a cup of tea at his side.

He had listened to the dictation for an hour or two and had then gone to bed, leaving his host still working.

Edgar continued at his desk, with only a couple of hours sleep, all that night and all the following day. He slept till noon on Sunday and then worked through the afternoon and the whole of the night.



"By nine o'clock on Monday morning, pallid, unshaven, and with almost hysterical fatigue lining his face, he announced that he had finished his 80,000-word novel on the life of Charles Peace, and went to bed for two days with the satisfaction of knowing that he had earned £4,000 in serial rights in sixty hours."

To the ordinary business man, of course, the occasion for such a *tour de force* as this never arises. Yet there is one thing which every business man has in common with Wallace—the need of some means which will enable him to dictate at any moment, without waiting or delay, and to go on for as long as may be necessary. That is a need which the shorthand writer does not and never can fill. Only the dictating machine, automatic, tireless, always

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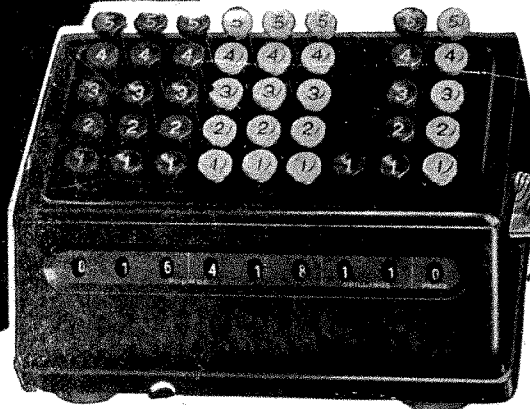
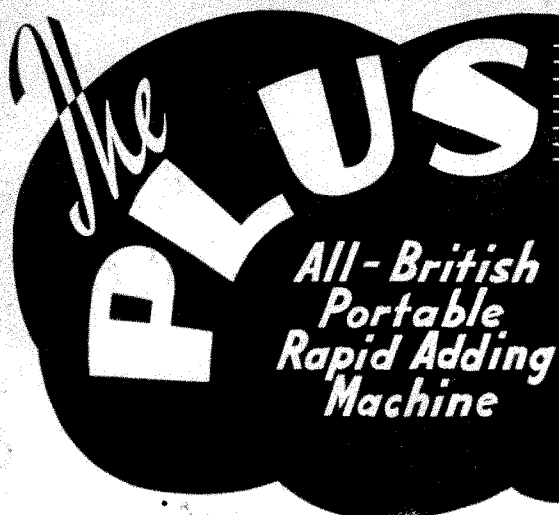
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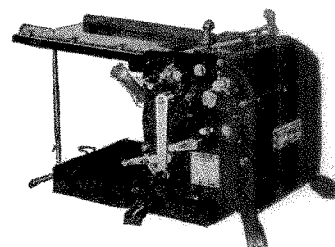
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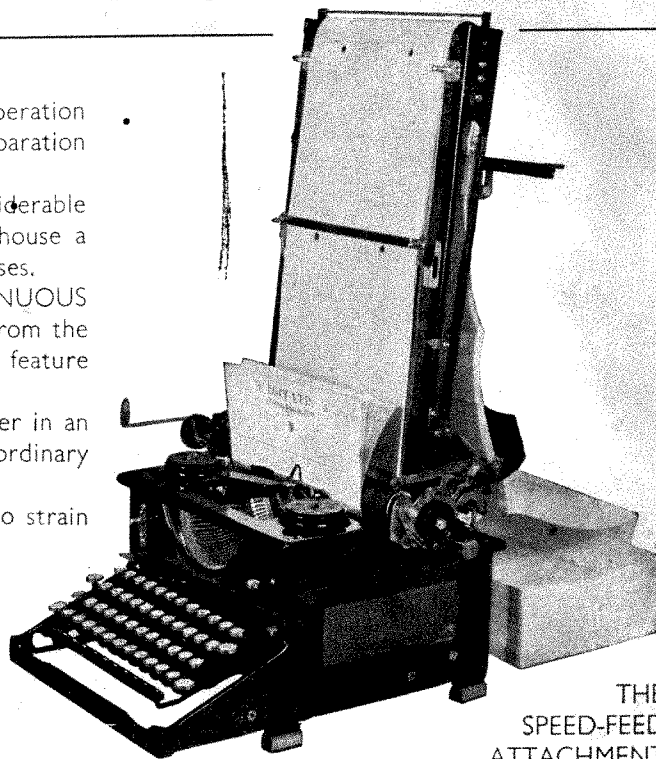
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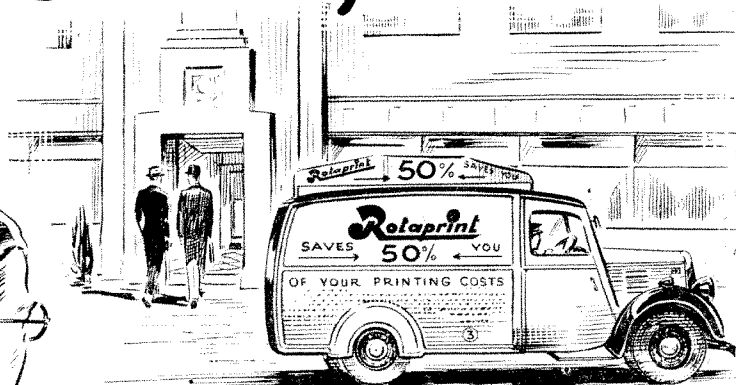
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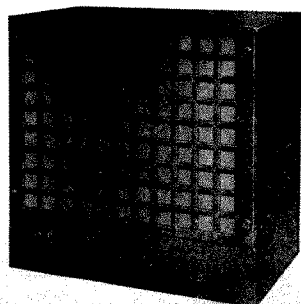
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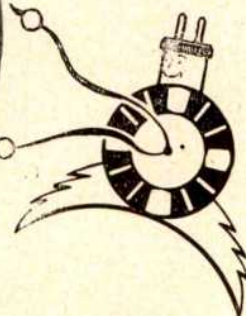
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PLUG IN TO GREENWICH TIME

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Building MEN Who Will *Build the Business*

HOW many companies employing technicians, factory workers, salespeople, clerks, and so on, can check over their entire personnel and feel assured that each member of the staff—from senior executives to office boys—really understands the organization for which he works?

In the average firm, how many employees can be found who are familiar with the materials that go into the company's products, or with the reasons why those products command their markets in the face of competitors' goods? How many of the employees appreciate the basic facts behind the company's policy and administration or can carry outside a complete picture of their employer's business?

I think, very few.

Yet I suggest that employees would work far more intelligently and more efficiently if they had a better understanding and a wider view of the jobs on which they are engaged.

A Danger of Specialization Is OVER-Specialization

Specialization is very necessary, but

in business to-day is not this trend of specialization in danger of becoming unbalanced? Are we not losing sight of the vital need for co-ordinating the work of the specialists and of employing it on a background of wider general knowledge and application instead of isolating it in cold detachment?

In industry generally I fear that there

is this danger and, realizing the handicap which such insularity is to a business, we have formed our administrative policy to combat it.

This is a policy which holds that every employee should be *sold* on the particular concern for which he works, and that he should remain sold during the whole period in which he is employed.

By an employee being *sold* I mean his being thoroughly enthusiastic about his firm and his job through (a) understanding the basic objectives of his firm as a whole, and (b) seeing and understanding the value of his own job in its relationship to those objectives.

This Plan Needs Management's Constant Initiative

To bring employees into this state it is necessary for there to be in operation a plan—devised and sedulously maintained by the management—of personnel education. Members of the staff must be shown the wider aspects of their jobs and, even more important, they must be impressed with the need for wholehearted co-operation instead of individual and departmental isolation and jealousy. Isolation and jealousy are the wreckers of business welfare and the destroyers of much personal happiness in business.

Now it is quite possible for an



"Our offices are furnished with first class equipment and are laid out to give the maximum amount of light and freedom of movement. It is costly and detrimental to the business, as well as inconsiderate to workpeople, to have energy absorbed, attention distracted and tempers frayed by badly laid-out or inferior equipment."

enthusiastic and energetic employer to inaugurate a policy of this kind. It has often been done, and with considerable success. But, unfortunately, there is a high mortality among such schemes: mainly for the reason that continuity of the policy is difficult to maintain.

No staff, however ideally managed, ever remains stationary for any great length of time. For various reasons—all perfectly legitimate reasons—executives and other employees leave and newcomers take their places until, after cycles of time, most staffs have completely changed.

In their technique of administration employers rarely take this metamorphosis into consideration. Especially are they liable to overlook it if their labour turnover is low. Changes of personnel are then hardly perceptible in short-range considerations of time. If, therefore, the initial virility of a staff education scheme is allowed to wane as time goes on it is obvious that successive newcomers will be subjected less and less to its influence. There comes a time, therefore, when it is found that an organization exists which has no knowledge whatever of the original admirable policy of the company. Only the unfailing attention of the management to the plan will prevent this deterioration from setting in.

Insufficient Knowledge is Fatal to Efficient Service

When we formed our company two years ago we decided to incorporate into our administration a continuously functioning staff-training scheme.

In our past experiences with other concerns it had been revealed clearly to us that no advertising agency can properly serve its clients if the only information it has to work on is the client's name, the brand of his product and a few fragmentary details about his selling plans.

To work successfully the advertising agent must be at least as well informed about his client's company history, board-room policy, objectives and general functional details as are the client's directors themselves.

We decided, therefore, to devise our policy from within. Before attempting to make our services available to clients outside we would first plan to ensure that every member of our staff would have the fullest information, the widest range of facts it was possible to give him for the most intelligent execution of his own job.

It was our decision that this condition should be maintained at all times, so that, equipped ourselves with highly specialized services working on a background of greatly extended general knowledge, we could render to our clients a service that was unique in its constructive effectiveness, smooth-working and economy.

I am not, in this article at any rate, attempting to extol my own company's technical achievements in the sphere of advertising.

True, we are an advertising agency, but that is incidental. What I am putting forward is a policy of staff education that is of vital importance to all businesses since its effects are far-reaching in the direction of improving a firm's functional value: raising the morale of its staff and of tending to reduce the ratio of general overhead costs. If such a policy will work advantageously in one business it will, properly applied, operate with similar effect in any business.

Full Understanding Assists Consistent Development

But let me proceed now to the practical working of the scheme itself.

As a company we are young, but we are not small. We are, therefore, well fitted to grow up in complete understanding of one another. Our few shareholders and directors are men who actively specialize in, and make themselves responsible for, all the work we engage upon. Thus every department is able to progress in proper relationship with one another. There is no possibility of any section overdeveloping or of lagging behind.

The aim of every senior employee is to pass the benefit of his wide and practical experience along to the more junior members of our concern.

These Classes Make the Scheme POSITIVE

As a general policy we think this good, but in order to make it still more

effective, more specific, there must be the positive, *active* scheme of application.

Our scheme of application consists of educational classes held within our own offices. The first series comprised seventeen Thursday evening classes. They were quite voluntary, but the average attendance was 89 per cent of the entire organization. A fact which confirms, I think, the popularity of the idea.

Each evening one of the senior executives took one or more specialized subjects. Verbatim reports were taken, and on the following day transcriptions were issued to everybody regardless of whether or not he or she had attended the class.

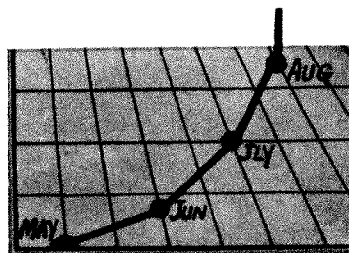
At the end of the series a large conference-room was engaged and 84 per cent of the whole staff sat for a written examination.

The examination papers, by the way, were identified by numbers, not by names, so that the candidates were unknown to the five examiners who awarded the marks. Prizes were given: £5, £3, and £2 for first, second, and third places.

This initial series of classes and examination was extremely successful. But, glad as we were to see the keenly competitive spirit displayed we felt that the education in the technique and policy of the firm's work that was being achieved was the really essential factor.

(Continued on page 28)

GO-AHEAD POLICY . . . Beats



Business Doldrums Peps-up Flagging Sales

were arranged, and a prize contest was organized for the sales force.

Results, to quote the managing director himself: "In the following four months we sold more of these products than in any whole year previously. In fact, we have had to extend certain parts of the plant to cope with the demand—which is still slowly but comfortably increasing.

"We are now taking advantage of this market activity to swing in our main line again. There is every sign that this main line can be floated along into activity once more by the successes of the other products."

This is a clear confirmation of the opinion, written in *BUSINESS* recently by Mr. Colin Kingham, head of Rolls Razor, Ltd., when he said, referring to the depressed state of things a little while ago: "Business history proves that the successful firms are those who take advantage of temporary depressions, continue or increase their publicity, and reap a just reward."

EFFECTIVENESS of a bold and aggressive policy in the face of "slumping" conditions is revealed in the case of a manufacturer of agricultural supplies: poultry and cattle foods, patent manures, etc.

In 1938 the spring sales of this firm's main line began to sag badly. As this line represented the bulk of the firm's turnover, things did not look good, as the months went on without any sign of revival.

Instead of retrenching, cutting down advertising and generally tightening up on expenses the managing director ordered a hundred per cent increase on a drive behind all subsidiary lines—leaving the main line to take care of itself.

For the subsidiary lines, the "poor" sellers, thousands of new booklets were printed; a direct mail campaign was launched; advertising was changed to feature the fresh products; sample offers

Output went *UP*: Costs went *DOWN* when Production Management was Replanned

at PATON, CALVERT & CO., Ltd.

The Article in Brief:

Description of Works, Etc. Products—Expansion under difficulties—Labour details.

Before Reorganization. Bottle necks—No real planning—Haphazard instructions—Consequences (a) in the Works, (b) in estimating dept., (c) in costing dept.

Remedies Applied. 1. Comprehensive planning scheme. 2. Stores reorganization. 3. Reorganization of estimating and costing depts. 4. Budgetary control of expenses.

Description of above—Shop planning—Central planning—Sales forecasting—Issue of all orders from central planning dept.—Master route cards—Gantt charts—Daily order of work and delay reports—Effect on maintenance dept. and plant lay-out—Complete stores unit with requisitioning powers on purchasing office—Perpetual inventory—Wages linked with count into stores—Buying to a schedule—Estimating and costing—Closing the circle—Standardized practice throughout—Cost comparison cards—Responsibilities allocated.

Reaction of Management. Management kept fully informed—Destructive criticism—Scepticism—Foremen and their authority—Amount of paper—Number of clerks required—Heavy initial overhead expenses.

Results. Knowing not guessing—Customers' inquiries and delivery—Foremen performing more useful work—Reduction of idle time—Effect as regards executives—Plant lay-out and seasonal rushes—Overstocking reduced—Overhead expenses not allowed to drift—Responsibility for wastage.

Costs and Savings. Cash results and intangible results—Initial cost—Additional costs per annum—Savings.

The following is the concluding half of the article on this subject. It reads straight on from page 38 of last month's issue.—Ed.

DAILY order of work and delay reports sent to works manager, daily. Thus each day the works manager, without moving from his office, could see by the aid of these two reports the exact position in each shop.

(d) Written instructions on daily time sheets to operatives from shop planners. Each time a job was completed, the operative would report to the shop planner, who would insert the next job on the time sheet.

(e) Arising out of the planning of all works orders, weaknesses in other directions were revealed, notably with regard to machine maintenance and tool-making. Considerable delays due to die-setting, machine breakdowns, machines waiting for attention, etc., were shown up; the co-ordination of tool production with works programmes was constantly out of balance, and it became apparent that to get the best out of the planning scheme the whole of the maintenance and tool-making section would have to be reorganized. This was done, and the work was divided into two sections under separate

foremen, both being responsible to the works manager. One section covered machine maintenance, etc., and the other tool-making. Provision was made for contact with the planning department at all times, so that the maintenance department knew in advance when die changes, etc., would be required. Further, breakdowns were notified by the foremen to the maintenance section through the planning department, and in certain cases more die setters were engaged. Also a system of continuous inspection of machines was started.

(f) Before the installation of the planning scheme, the plant layout was not good, due chiefly to two causes, viz., geographical, which of course still exists, and, secondly, to lack of space through poor co-ordination of component production, causing accumulations of parts around the machines. The result was that in certain cases goods had to be moved considerable distances for final operations, such as packing, and sometimes covered in one form or another, the same route two or more times.

Planning Made These Movements Possible

Through Planning it became possible to carry out considerable alterations to the layout of plant and stores. These

alterations were of two kinds, viz., complete transfers of plant or stores from one location to another, and, secondly, rearrangement of plant within particular shops. Examples of the former were the transfer of the whole of our hardware plant to the heavy press shop, adjacent to the new printed plate stores, which in turn were set up alongside the printing shop, thus completing the chain; and the transfer in a reverse direction of stores for certain toys. Examples of the latter were the setting up of line production for certain products by bringing together all the different making-up operations in a shop, thus eliminating accumulation at various places of partly finished components and permitting output to flow through to the final stage without interruption.

ii. Stores

Additional stores and sub-stores were created and new ones opened in respect of components. Geographical difficulties were as far as possible overcome by endeavouring to locate the stores, so as to ensure minimum movement of material. It was impossible to create a central store.

A chief storeskeeper was appointed, and a central clerical section set up.

No goods were moved without a document.

Balance cards were opened for every purchase, which was correspondingly segregated in the stores. Order points based as far as possible on past experience were marked on the records and also indicated on the stores themselves.

It then became possible to institute a system of perpetual inventory arising out of the fact that, as each card balance was cleared, the same should have happened to the corresponding items in store. Instructions were given that all requisitions for purchases were to be made on the purchasing office by the stores clerical section instead of allowing the purchasing office to determine quantities themselves. Requisitions on the planning office for the making up of finished products were also transferred to the stores. Payment of wages was linked with the count of units received into store by means of forwarding tickets which, when passed by the storeskeepers, were handed to the shop planners for entry on the employees' daily time sheets.

Finally, through the introduction of forecasting, it became possible to expand greatly the placing of contracts on suppliers to a schedule.

iii. Estimating and Costing

Having got the works and stores practice into good order, it became

possible to deal with the estimating and costing departments.

The idea followed was in effect to complete the circle, i.e., the costing and estimating system was built around the new works methods, co-ordination of the whole being obtained through the planning department. The arrangements made were for the master route card bearing estimated costs, to be made out by the estimating department following the acceptance of each estimate. Copies were sent to the planning and cost office, the former copy being the basis for all works instructions and the latter as a guide to the cost clerks when completing the actual costs, and for comparison. Thus standardization throughout was ensured, and the way was clear for a proper job costing system to be started.

Copies of all shop orders when issued, were supplied to the cost office by the planning department, followed by a further copy marked "Completed," checked with actual job costs as ascertained from the daily time sheets and requisitions and compared with the estimated costs on cost comparison cards. These cards are up to date and constantly available to the works manager.

iv. Budgetary Control of Expenses

Concurrently with the revision of the costing and estimating methods, a system of budgetary control of expenses was put in. This provided for forecasts of expenses for twelve months ahead allocated in detail to the shops and other spending centres.

Comparisons of expenses against the forecasts were made monthly and the results graphically shown on Gantt charts. Meetings of foremen and others are held each month following the compilation of the charts.

Reaction of Management

1. Before and during the installation of the planning scheme, the managers, foremen and others were fully informed of the Company's intentions; and suggestions and co-operation were requested. They were shown what the methods would be and the advantages expected therefrom.

Nevertheless, as might be expected, enthusiasm was lacking, and it was not until the complete scheme had been running for some time, when a clearer view was obtained, that the foremen's destructive criticism began to diminish. Now, although criticism is still levelled (which incidentally is not a bad thing), enthusiasm is growing. The chief difficulties were:

(a) Scepticism.

(b) The foremen, being accustomed to working on their own, were apt to resent what they thought was usurpation of their authority, and also they had a feeling that they were being turned into mere clerks.

(c) Volume of paper involved: There was some justification for this, but the fact remains that written instructions are far better than verbal.

Incidentally, now that experience has been gained, the amount of paper is being reduced.

(d) Number of clerks required: As regards (c) and (d) it may be mentioned that in putting in any scheme of this nature, it is almost impossible to avoid heavy overhead expense at the commencement. It is only when the scheme has been running for some time, that the situation can be summed up and expenses brought to their true level.

Results

The results we have obtained may be summarized as follows:

1. *Knowing, Not Guessing.* (a) The works manager knows that every order has been planned to meet delivery requirements, or, if not, why.

(b) He knows of abnormal happenings and costs before it is too late.

(c) Sales department are aware of the works load generally, and orders can be arranged accordingly.

2. Customers' inquiries answered promptly and speedier delivery given. We have reduced the delivery time in one section by 25 per cent and in another by 33½ per cent. A check on deliveries has been instituted by means of a broken promise routine, whereby each order which has gone beyond the due date (all orders bear their due dates) is automatically thrown up.

3. The foremen have much more time in which to concentrate on the smooth running of their sections, the preservation of their machines in good order, the elimination of waste, and the improvement of quality.

4. Reduction of idle machine time.

5. All executives freed from routine.

6. The work in the factory proceeds smoothly in the absence of the executives on holiday, etc.

7. The plant layout is more flexible, and seasonal rushes are dealt with more easily. Through line production we have increased the rate of output considerably, varying from 11.3 to 33.3 per cent.

8. Overstocking much reduced.

9. Overhead expenses controlled

against a standard, instead of being allowed to drift.

10. Wastage is now known and responsibility allocated.

Costs and Savings

With regard to all new schemes, the tendency is to endeavour to measure the results in cash only. While admitting that cash is the ultimate measure, it must not be forgotten that intangible results, such as have been outlined, are often as important, because they ultimately lead to the desired cash saving.

Furthermore, a long view must be taken, as drastic schemes of this nature are not embarked upon with an eye to the present only, but as a means of building a sound basis for future expansion and development. However, the following figures as regards actual savings may be of interest:

Initial Cost. The initial cost which covered the consultant's fees and the necessary removals and reorganization carried out in the works, worked out at approximately 1 per cent of turnover.

Cost per Annum. We estimate that the cost of running the scheme, which covers salaries of planning staff, additional staff in the stores, cost, and estimating offices, and equipment, has involved us in *additional* expenses per annum amounting to approximately 1 per cent of turnover.

Savings. Trade improvement has caused the works tonnage output to increase by 18 per cent, but works wages have only increased by 13.7 per cent.

The ratio of stores and stocks to cost of sales before the planning scheme was 24.2 per cent, whereas at present it is 22.5 per cent.

The above actual savings taken together do not quite equal the additional cost given in the preceding paragraph, but we feel that the general improvements brought about and mentioned earlier under results, more than justify the adverse difference ascertainable from present measurable results alone.

This complete article was given as an address at the Seventh International Management Congress held at Washington, U.S.A., in the summer last year.—Ed.

Cut the Jargon from Your Business Letters

Jargon-Merchant Writes . . .

We are in receipt of your favour of—
We beg to enclose herewith }
Enclosed please find
Should you require
We will communicate
We are in complete agreement
It will necessitate our
We are now in a position to state
In our communication
We trust
We are desirous of
We beg
Your esteemed favour
In respect of your
Assuring you of our best attention
Awaiting your further (or esteemed) commands
Thanking you in anticipation
Yours obediently
We remain, dear sirs

Business Man Writes . . .

Thank you for your letter of—
Here is
If you want
We will write
We agree
We shall have to
We can now say
In our letter
We hope
We want to

Rot, don't use. •

Don't Pay Bonuses Unless—

Why 'Star' Men Need Managers

Radio-Worked Office Machines

By The EDITOR

Cash Alone Can't Buy Staff Goodwill

SINCE December last we have spoken with several firms which gave money bonuses as Christmas presents to their staffs.

Bonuses do certainly infuse staff with a feeling of goodwill and co-operation that cannot be measured in cash against the amounts given out.

When employees talk favourably among their friends about the firm they work for, it is propaganda of a very valuable kind.

But cash bonuses at Christmas—or any other time—do not necessarily guarantee goodwill between employers and staff.

Unless the *whole policy* of management is shaped to build up goodwill, cash bonuses are just so much waste of money.

In fact, they are worse than that. When employees criticize money presents as camouflage for irksome conditions suffered during the rest of the year, then the matter grows from a mere loss of money into a definitely harmful practice.

When Planning Summer Holidays

TIME will soon be here for summer holidays to be planned. Many firms give a bonus of "holiday money."

This point of ensuring that the entire management policy is in harmony with such a spirit of generosity is therefore worth bearing in mind.

As one director succinctly put it: "Although cash bonuses as seasonal presents do help to create goodwill among your employees, unless it is backed up by intelligent personnel relationship for the entire twelve months of the year, it does nothing towards making your employees satisfied and happy."

Speaking of money, an important point is touched on by J. D. Houser, in his book, *What People Want from Business*. Houser says: "What people want from business lies deeper than either money or promotion. But because this want is psychological in nature, management has overlooked or under-estimated it. *Employees want to feel that they are part of the firm for which they work, and they resent the subtle and poignant affronts to human dignity which they are often compelled*

to undergo. Frequently, because the executives work with ideas and the employees work with things, the executives assume an air of decided superiority. This egotism among the executives is a deeply rooted cause of much of the industrial and social unrest to-day."

Why 'Star' Men Need a Manager

A SHREWD manager of men, and especially of salesmen, recently said to us: "Temperamental people all suffer from one of the many forms of inferiority complex. They have no real confidence in themselves. They can be effective only if their personal lack of confidence is replaced by confidence in someone or something."

"Without this someone or something to tie to, lack of confidence (with resultant anxiety) is their dominant characteristic."

"The measure of their effectiveness is therefore in proportion to the confidence they absorb from outside. That is why super-salesmen, creative producers of business, singers, actors and artists need a constant injection of confidence from the executives who are managing them."

"In fact, this ability to inspire *men* is, to a far greater extent than anything else, the hall-mark of the really great sales manager."

Radio-Operated Business Machines

IF Walter Lemmon, manager of the Radiotype division of the International Business Machines Corporation in U.S.A., perfects experiments which are now well in hand, we may soon do much of the paper work in our offices by radio-operated machines. The radio typewriter has already arrived. It is capable, we are informed, of typing up to 120 words a minute, including the most complicated forms. The next step will be radio-operated adding machines, cash registers, and type-setting machines.

There are still problems to be overcome, but the experiments have progressed to a point where the Corporation has applied to the U.S. officials for the necessary wave-length space.

It does seem, therefore, that the experimenters are on the threshold of a revolution that may be as far-reaching at least as the application of electric power to hand-operated office machines.

Loyalty is a Guilt-Edged Asset



Skill, almost to the point of perfection, is to be found in unexpected places—if only we seek it out.

More efficient than trusting to the virtue of effort itself is the executive attitude of assuming that that fellow who needs prodding is the fellow who could not do the job even if he did respond to the prods.

The widespread faith in the usefulness of simple stimulation to work harder needs to be supplemented to a large extent—perhaps even supplanted—by the faith that if you have the right man for the job, he will not need the stimulation.

An extra week spent in selecting the subordinate may result in saving years of misdirected time trying to get him to produce more.

The prevalent notion that the man with outstanding abilities in one direction is vastly weak in others is contrary to verified fact.

Greatness in a few qualities is *not* invariably attained at the price of profound mediocrity in others.

WORTHWHILE men are so constituted that you cannot get their loyalty on an inadequate wage, just as unjustifiably, high-wage offers cannot bribe them away once you have inspired their loyalty.

How 'Imperial Chemicals' Control their Salesmen's Car Costs

With 350 cars covering 6,000,000 miles a year the most searching control is essential. The system which I.C.I. generously permit us to describe here is the outcome of 10 years' study of every known method of analysing car operation costs

THERE is generally a good deal of difficulty in getting authentic and reliable information on the cost of operating cars used by the travelling representatives of any big business undertaking. Much valuable data on the subject is, of course, in existence; but hitherto-published information on business-car costs has been confined to general principles. Actual facts and experience have rarely been disclosed by the people best qualified to do so.

Thanks, however, to the courtesy of the Imperial Chemical Industries, Ltd., I am now able to place information of considerable value at the disposal of BUSINESS readers, for whom the matter of controlling and costing their representatives' cars is very important.

The Aim is Greatest Possible Simplicity

As we own and operate 350 cars handled by I.C.I. representatives who cover an aggregate of six million miles every year, said Mr. Clapham, you will realize the imperative need for controlling car costs on a mathematical basis. It may interest you to know that the system we put into operation two years ago is the result of at least ten years' study of practically every known method of analysing car operation costs. It incorporates all the desirable features of the best systems, but eliminates complication by the use of

By **RICHARD
TWELVETREES, A.M.I., Mech.E.**

from an interview with

H. N. CLAPHAM

Superintendent, Central Transport Department, Imperial Chemical Industries Ltd.

simple forms and documents for our travelling representatives. By these means, all essential facts can be presented in the form of analysis sheets and graphs which enable the officials of the Central Transport Department to investigate any detail needing attention without correspondence, interviews with the representatives concerned, or other delays.

Here, for example, he continued, is a graph showing the actual working costs of the thirteen different makes of cars constituting our present fleet, which demonstrates the degree of accuracy ensured by our recording system. The graph shows at a glance which of the car types gives the best results for our work.

Within certain limits, however, operating economy is not always the de-

ciding factor when the purchase of new cars is under consideration. Much depends upon the nature of the work required of the representatives in the various areas of operation, or divisions of the sales organization. It is quite possible that the most economical car in, say, the 10 h.p. class may be inferior to another make in the matter of comfort or general convenience of the user.

Again, some of our technical service representatives have to carry such things as small I.C.I. chemical degreasing apparatus or other samples of the equipment we manufacture for demonstration purposes, thus influencing our selection of cars with particular reference to the character of their bodywork.

Where long journeys are involved we always make a special point of providing our travellers with cars which have given the most satisfactory results for this particular kind of service, even though the operating costs may be appreciably higher than the most economical type in that particular category. You will see, therefore, that while our system records every single item of car expenditure it does not, in fact, determine our fleet operating policy in all respects.

Most Cars are Exchanged Every Year

The main principle observed in connection with this large fleet is that of buying new cars every year by arrangement with the various manufacturers direct, except in certain cases where models of higher prices are needed for special service and the period of service is extended to two years before replacements are effected.

Cars up to 12 h.p. are expected to cover an annual mileage of at least 12,000, while for cars of over 12 h.p. it is found more economical to run the

IMPERIAL CHEMICAL INDUSTRIES LTD.														
OPERATING COSTS OF THE														
MAKE OF CAR AND NAME OF REPRESENTATIVE	REGISTERED NUMBER	DATE OF PURCHASE	MILEAGE AT		PETROL		OIL		RUNNING COSTS					TOTAL RUNNING COSTS
			TOTAL	Private Mileage included	Gallons	M.P.G.	Engine Pints	Gear Pints	PETROL	OIL	GREASING	TYRES	REPAIRS AND REPLACEMENTS	
									£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d. d.p.m.

On page 32 is reproduced a detail expense sheet which is kept for each individual car. Individual car expenses are then transferred to . . .

mileages up to from 35,000 to 40,000.

So far, the arrangement appears quite simple, as indeed it is, provided the fleet is supervised carefully and the individual cars are maintained in good condition throughout their working period, so that when "traded-in" after covering the pre-determined mileages the cars are not the subject of charges made by the manufacturers for restoring them to saleable condition.

A Very Important Point When Trading-In

This point is one calling for the close attention of fleet owners whose calculations of costs may be seriously affected if, when the cars are "traded-in," charges amounting to £20 or £30 per car have to be met as the result of neglect

did arise now and then, the car manufacturers can dispose of ex-I.C.I. models immediately they have finished work for the company.

The secret of the consistently good condition of I.C.I. cars is that the Central Transport Department requires each of its representatives to submit regular reports to Millbank.

Printed questionnaire forms are issued for the purpose, of which the query column, enumerating forty-two items, deals with every conceivable phase of good car maintenance as well as the mileage covered and petrol consumed.

This questionnaire is so complete and yet so simple that even should a representative possess but the scantiest knowledge of car upkeep he could not possibly find an excuse for allowing his vehicle to get into bad condition.

MOTOR CAR EXPENSE SHEET	
Northern Division	
Name	Office
Make of Car	Period from
H.P.	Represents
Speedometer Reading	(To Date) Miles
Time Taken	Miles
Mileage for Period	Miles
Petrol	Gallons
Engine Oil	Pints
Gear Oil	Pints
Washing	
Gravelling	
Polishing	
Greasing	
Tyre Changes	
Repairs	— vouchers attached
Replacements	— vouchers attached
Sundries (to be detached)	
Included above are	Miles covered for private purposes at
Signature	
Payments authorized by	
N.B. All bills incorporated in above total must be attached to this sheet.	

This is the printed form on which salesmen must enter particulars of all car-running costs. Bills received for payments-out must also be attached. Forms are returned to transport headquarters.

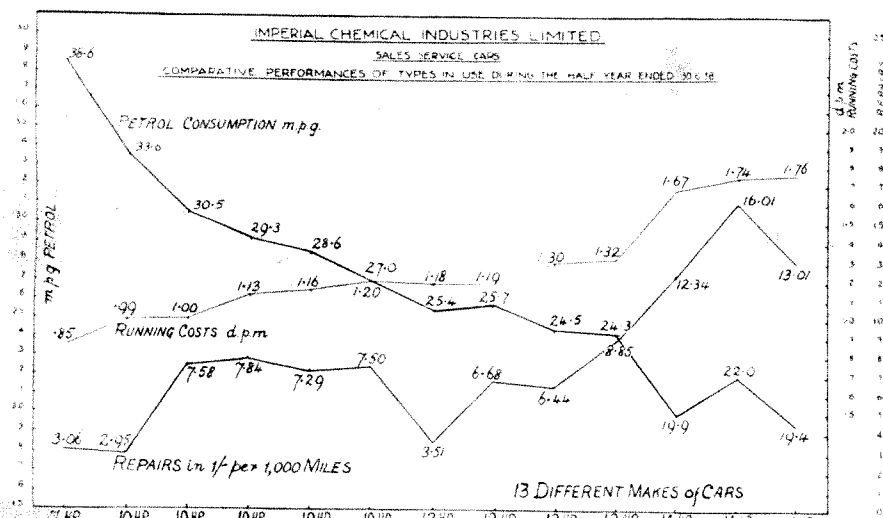
In addition to the above-mentioned report form, a small brochure containing rules for the maintenance of the company's cars is issued to every travelling representative, so that each man knows the extent of his responsibilities for the car issued to him.

Full Advantage Taken of Manufacturers' Service

In addition to maintaining close contact with manufacturers in respect to the annual replacement of cars, the I.C.I. takes full advantage of the facilities for quick and economical service provided by the leading car firms throughout their depot organization or in the garages of authorized agents.

Although the method of replacing cars annually dispenses with the need for overhaul work or major repairs, the company's experience proves that the cost of small repairs and adjustments is

(Continued on page 32)



Here are very valuable and interesting figures. They answer the question "How much does a car cost to run?" This chart reveals quickly and clearly the relative merits of various car makes and types.

or rough treatment by the representatives concerned.

Part of the I.C.I. Central Transport Department system is specially devised to preserve the condition of all cars during their period of service and, whereas formerly claims of the nature

The idea of using a printed form is, of course, excellent. No more than a few minutes' work is required to furnish all the information demanded by the headquarters officials concerning the condition and performance of every car in the fleet.

MICAL INDUSTRIES LTD.

R CAR EXPENDITURE

FLEET DURING THE										ENDED										19																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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WASHING					GARAGING					PARKING, TOLLS, ETC.					ACCESSORIES					SUNDRIES					INCLUSIVE RUNNING COSTS					DEPRECIATION					TAX					INSURANCE					DELIVERY CHARGES					NUMBER PLATES					TOTAL OPERATING COST					CREDIT FOR PRIVATE MILEAGE					NET OPERATING COST					REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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... constitute Total Fleet Costs on the large Master Sheet shown above. This sheet, showing running, variable and fixed charges is completed every six months

This Suggestion System Was a Self-Starter

A FEW months ago we started to issue a monthly house organ," the managing director of a small manufacturing plant told us.

"It is quite a simple publication, ten or twelve sheets run off on an office machine and 'stabbed' up between standard printed covers.

"In the second issue the acting editor, being a bit short of matter, asked one or two of his colleagues to send in a letter suggesting some improvement in the business.

"The letter came in and was published. Without any more preparation than that, with no further official help in the way of 'suggestion-boxes,' and no prizes, an extremely useful suggestion system developed.

"We were so pleased with this spontaneous effort and with the value of some of the suggestions that we have now instituted a plan of cash rewards—and, to be fair, we made it reflexive to cover the first ones sent in."



NEW PACK WILL HELP THE USER

Adhesive bandages collect dust. A marketing idea to overcome this difficulty is this pack which embodies a hinged and slotted flap through which the dressings are pulled. Designed and made by The Metal Box Co., Ltd.

This Form Saves Time

ONE company requires its salesmen to send in each night a brief report and expense-sheet from the town in which they stay.

An interesting piece of stationery helps this idea along. It is a flat record-sheet which, when folded in the marked creases, forms an envelope, with address printed ready for posting.

Break-Even Point Plan to Insure Profits

WHEN departmental executives as well as every officer of a company know where the company begins to break even and where losses begin to occur, it is much easier to adjust operating expenses periodically so that income will match outgo.

An engineering firm manufacturing jacks and lifts has worked out a plan which calls for budget revisions whenever sales for a given month fall below the break-even point. This plan has proved extremely helpful in maintaining profits.

Letters of Consistently Good Appearance

THREE specimen letters, a very short, a medium and a full-page one, mounted on a board and varnished, are posted near the desk of

each typist in one firm selling luxury products.

This ensures that all out-going letters have a consistently good appearance. New personnel know exactly what to do from the moment they start.

No More "Taking Round the Hat"

IN big firms there is always someone leaving after a period of meritorious service, or getting married, or having illness expenses, and it is common practice to take a collection in order to meet the occasion in an appropriate way.

But these collections come hard on many of the staff, and a feeling of moral obligation, or even fear of criticism, often urges people to give more than they can really afford.

To obviate this difficulty the staff of a Midland concern has instituted a voluntary levy of one penny only per week per person, no matter what his rank.

The pennies are paid into a pool, and in two years' working of the scheme there has always been enough to finance any particular occasion.

THE wise employer strives to have heads rather than hands on the job. The wisest employer has hearts as well as heads on the job.

The Way Back

**"Business is not COMING back, it must be BROUGHT back . . .,"
and this is the only method that will be effective now, urges**

W. J. CAMERON of the Ford Motor Company*

IT is nice to talk about enterprise. It is better to show a little of it.

This present moment seems to me to be a crucial one for business, because business is up against it as it never has been up against it before. It relied on political help; it relied on campaigns of hysterical advertising urging people to buy; it relied on some magical upturn out of the skies—it relied, in fact, on every form of hypodermic to induce artificial stimulus of trade.

All of these have collapsed, which is the best thing that could have happened.

There is now not a single hurdle left between business and its own job, the job that only business can do. The delusion of waiting for the comeback is over. Business is not coming back; it must be brought back, in pieces, bit by bit. We can well afford to tear down all the . . . campaign bunting and gag all the temple orators, if by doing so we can be brought to see that enterprise at this moment consists in rolling up our sleeves and our

trousers, and grubbing in the ground for the business that has vanished. The business man's job is to sell, and he never fulfils that function by merely asking other people to buy.

No more pep, no more hypodermics. We have entered a period when uninspired, deliberate, daily plodding and digging is the only thing we have left to rely on. We may recognize that gratefully, for it always was the best thing we had to rely on, though we did not know it.

We are going to bring business back by the same old application of energy to objectives that the farmer shows when he puts himself behind the handles of his plough and ploughs his field. He does not have a pep session with his missus in the kitchen before he goes out; he goes out in the cold morning and he ploughs. That is the sort of enterprise for which our present situation calls.

* In "The Management Review."

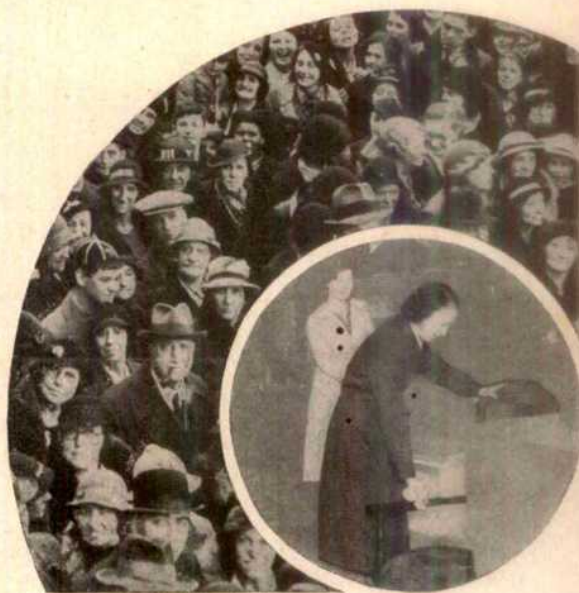
'Selected Areas' Marketing Plan will Raise this Product's Sale by Over 50 Per Cent

Here's a selling problem that faces many manufacturers: how to get low-cost distribution and sales for a potential national product.

Experiments showed this firm that concentration on specific areas, unsupported by big advertising, was an economic method of getting sales.

How the campaign is planned for the year ahead is told by

CECIL VOGUE, B.Sc., Ph.D., F.R.S.E.
Works Director,
Chemical & Natural Products Ltd.



Demonstrations in the home, in stores and shops, at hotels, etc., form a key point in marketing policy. The sales appeal is to the individual, not to the masses

CONCENTRATION is a factor often overlooked in sales policy, yet it frequently has decisive influence on the success of marketing a product. The effects can be seen clearly in the ratio of sales to distribution and in the percentage of profit.

As we all know, products are sold successfully on the policy of first getting national distribution quickly and then forcing sales by widespread Press advertising and other forms of publicity. But such a method is usually costly. Certainly it is not one which a small firm ordinarily finds economical. Big financial resources are needed because such effort is dispersed countrywide. Even with very popular and easily sold types of products, where distribution problems are simple and dealers willingly take stock, this heavy cost factor remains.

This kind of problem had to be settled when we took over the manufacture and marketing of Norill, a fabric cleaner and colour reviver. Should we go after national distribution at once? Should we advertise? Or should we build up more slowly, area by area, consolidating each territory as it was won?

Existing Distribution Channels Used First

To some extent we compromised. As our company handle the distribution and sales of Scrubb's Cloudy Ammonia and several other products stocked either by chemists, grocers and other retail outlets for household goods, we had a ready-made organization to distribute Norill. Our travellers therefore added it to their lines and got a fair proportion of their dealers to give it a trial.

But there were other factors involved. Competition from heavily advertised rivals had to be met, although we were confident of the superiority of Norill,

which works differently from other cleaners and is, for this reason we claim, more effective. When applied, for example, to carpets, fabrics, etc., Norill quickly becomes a foam. Dirt is caught up in the micellæ of the foam and the foam-dirt complex is easily removed. The usual action of "mopping up" which drives much dirt deeper into the material being cleaned is eliminated.

Advertising was another influence. To attack on a national scale made essential a fairly heavy advertising campaign. Support, too, for dealers by means of display material, folders, leaflets, etc., would be needed, all of which adds to costs.

Yet another factor to consider is the split market. While Norill is a household product, it is also for use in businesses. Business offices, factories, cinemas, hotels, public halls, railway and other transportation concerns could all use Norill on a big scale. Not only is there a difference of quantity in the sale unit in each market, but there is some distinction in sales method. The business man must be approached from the business angle, the housewife from the home viewpoint.

Again, the business market is divided between (a) those firms which carry out their own cleaning and (b) those which need a cleaning service. In hotels, for example, there is sufficient cleaning staff to handle any job of this kind. In most business places, however, the staff is insufficient for full-scale cleaning of carpets, upholstery, paintwork, and so on. Moreover, it is not usually convenient to send out movable material for cleaning: it must be serviced "in situ."

All these factors have influenced us in framing our marketing policy and practice. Since we took over Norill we have experimented with the national scale distribution, through our existing retail

outlets for other lines, in concentrating on specific areas and on the business market. Results have shown that concentration is our best policy.

For this reason our plans for 1939 are to concentrate on such centres of population as Birmingham, Manchester, Liverpool, Leeds, Sheffield, Bristol, Bath, Cardiff, Newcastle, London, and so on. The list we have decided upon are cities and towns with over 100,000 population.

Demonstrations Are Key To Sales Plan

The drive in each will take the form of (a) house-to-house canvass and demonstrations; (b) demonstrations in big stores, cinemas and hotels; (c) build-up of retailer outlets concurrently with the "dems"; (d) use of the usual types of informative literature.

A period covering January to May is to be used for the main effort, the time when housewives will be spring-cleaning. No advertising will be used to support the campaign (except for the space we take regularly in *Good Housekeeping*), nor will any sampling schemes or special discounts for dealers be employed. Our experience shows that the product, once used, holds the customer, and that the best way to get the customer in the first instance is to demonstrate the product.

By this concentrating on a town we arouse sufficient interest to smooth our way to the dealer. He is willing to stock Norill when he sees the manufacturer active on his doorstep. The practical example of sales effort has an effect in the limited area similar to that which a major advertising campaign has on a national scale.

We estimate a 50 per cent sales increase from our scheme. It is likely that we shall exceed the quota, but that is

the figure we aim at. It does not, however, include sales made to companies which provide a cleaning service.

While the activities of the companies concerned are not directly our concern, they do have influence on our marketing plans. They perform a function which we, in their absence, would have to do. Let me explain in more detail.

The two chief firms concerned are Situation Cleaning, Ltd., 30 The Broadway, London, S.W.1, and Joseph Caldwell & Co., Birmingham. These companies have a licence from us to use Norill for their cleaning work.

Take the case of Situation Cleaning, Ltd. This concern specializes in cleaning business and industrial premises, hotels, clubs, restaurants, cinemas, etc. By using Norill they can carry out, say, the cleaning of an office without any inconvenience to, or interference with, business. Carpets, upholstery, paintwork, walls, and so on can be cleaned and ready for use again within a few hours without any of the disturbance usually associated with such work. The job can be done at any time. As the company provide an all-night service, it is often carried out during the night.

These Services Provide a Big Sales Outlet

Now, there are thousands of businesses and other organizations which want services of this kind. They provide a big potential market for Norill. That is why Situation Cleaning, Ltd., and similar concerns provide a valuable sales outlet for us. They are developing the cleaning "in situ" market, especially in the commercial and industrial big users' field.

The sales schemes and plans of these companies is not, of course, any concern of ours. Naturally, if inquiries come to us for "in situ" cleaning, we follow the usual business custom of passing them on to those firms who deal with us. If, for example, you decided to have your factory, offices and other business premises cleaned, and addressed an inquiry to us, we would put you in touch with Situation Cleaning, Ltd., or Joseph Caldwell & Co., or some similar firm. That is, of course, if you wanted to have the cleaning job done for you. If your staff were to do it, then we would merely supply through one of our retailers the necessary quantity of Norill.

That, in brief, is how we have organized our sales programme for Norill. By concentrating on specific markets over a period of time, we are building up goodwill and business. This enables us to eliminate costly advertising and publicity expenditure. There is no dispersal of effort. That leads to a high ratio of sales and profit to distribution and cost. It also provides for a long-term policy of building up business without the least strain on the finances behind Norill.

The policy of granting licences to outside firms which will use Norill to build up their own businesses is also sound from our viewpoint. For these companies are non-competitive as far as we and our dealers are concerned.

At this point it is too early to say whether or not, when we eventually get full-scale national distribution, we shall

run countrywide advertising campaigns. Certainly we do not contemplate such action in the near future. Business expansion at present planned is fully taken care of under the policy outlined. We do not, for instance, plan even to send follow-up mail "shots" after our house-to-house canvass, because we know the demonstrations are sufficient

to get and hold business. Experiments in such schemes on a small scale have proved that follow-up tactics do not bring sufficient results to be economic.

Economic selling is, after all, the acid test of policy. It is the test of ours, a long-term policy. That is why we are confident our plans will bring gradual conquest of the national market.

Travel to the Continent Without Losing Working Time



L.N.E.R.'s

Air-Conditioned

Sound-Proofed

'Hook Continental'

By F. T. POULTON

Editor of BUSINESS

BUSINESS men, when they travel to the Continent, naturally want the actual travelling to encroach as little as possible on valuable working time.

For this reason the LNER's London-Harwich-Hook of Holland nightly service is of particular value. The train departure from London (Liverpool St.) at 8.15 p.m. allows you a full working day, and, if you like, time for dinner before embarking at Platform 9.

But comfort, too, is what the business man wants on these trips. Comfort ensures freedom from nervous and physical fatigue, one of the greatest needs in business to-day.

The evening special on the London-Harwich section of this route is one of the most modern trains in Britain.

Known as the "Hook Continental," it is air-conditioned and sound-proofed throughout: two outstanding features that make for comfortable travel.

When I made the trip on this train recently I had not time to dine beforehand so, as many business men prefer to do, I had the meal on the train.

Part of the first-class accommodation is of the "open saloon" type, as on the famous "Coronation" and "West Riding Limited" expresses, and this is admirable for the service of meals. It gets away from that nuisance, experienced on ordinary trains, of having to move to a restaurant car for meals.

The four passengers per "section," the swivel arm-chairs and the specially shaped tables make an extremely com-

fortable arrangement for the traveller.

But for those who prefer the actual compartments, quite a number are provided. Incidentally, this train has Pullman, first and second classes only, in keeping with continental practice.

During the journey I took particular notice of the air-conditioning. The weather outside was bitterly cold, but inside the temperature remained steady at nearly seventy. There were no draughts, no apparent movement of air at all. The three travellers in my "section" were smoking cigars; I smoked a pipe. It was impossible to see where or how our smoke disappeared, but the air remained perfectly clear and fresh, not a trace of "fug." That is air-conditioning.

The sound-proofing, too, adds greatly to one's comfort. It is pleasant to be able to talk quietly and naturally, and to hear without straining.

Physical details of the sound-proofing are asbestos acoustic blankets in the body-sides, floors and roofs of the cars, half-inch thick sheets of sponge rubber under the carpets, and double-window glass.

Not the least attractive feature about this train is the scheme of decoration. Soft shades of green, fawn and maroon: they are soothing.

Most travellers to and from the Continent have a fair amount of hand luggage. It is well provided for on this train in the way of big racks, and exceptionally wide corridors and vestibules.

The run to Harwich (Parkston Quay), non-stop of course, takes 1½ hours;

the boat is waiting, you go aboard and sleep comfortably until Hook at 5.30 a.m.

On the return, you dock at Parkston Quay at 6 a.m. where the "Hook Continental" again awaits you. An attrac-

tive breakfast *en route* (or settle down in the chair and finish off your sleep, the sound-proofing once more being welcome) and you are in London by about ten minutes to eight, again with a full working day available.

IDEAS that are Building Up Sales

Sample Offer Turned Line From 'Sticker' To Seller

OLD lines that "stick" can usually be turned to advantage as premiums and, by increasing sales of other lines, cut what might otherwise become a dead loss.

An instance of recent success of this kind comes from a Midland firm manufacturing household products. Dealers had complained that a certain line would not sell. The firm, too, had a heavy accumulation of stocks at their factory.

Several schemes were suggested, but most of them went no farther than merely getting rid of existing stocks. This meant a direct loss which, the firm felt, was unwarranted. Then one of the salesmen proposed that the product should be linked with the firm's most popular seller. Every customer buying the popular seller should be offered one pack of the "sticky" line at half-price as an inducement to "try it out."

Dealer co-operation on the scheme was gained because the firm credited retailers with the difference between trade and reduced selling price. Display-cards, window-bills, and leaflets were used to push sales.

The campaign was a success. Not only were old stocks cleared out, but orders continued steadily. The scheme had "put the product on the market." In addition, sales of the popular line were also increased considerably which, in effect, offset the loss incurred by the reduced price.

'Group' Selling Raises Sales, Not Costs

GROUP instead of unit selling is a policy being used successfully to-day to increase volume of sales without raising costs. A good example is that of a famous gramophone record company. They are marketing records in sets of three instead of individually. But each record can be sold as complete in itself if the customer wants just the single recording. In most cases, however, buyers can be persuaded to take the set.

Effects of this policy is showing in the sales figures. The increase is now

running at about 80 per cent. Not only are dealers selling three records where they sold one before, but they get an extra 6d. for the folder containing the set.

It is not suggested that the idea of group selling is new. The point is to find new uses for the idea. Previously, for example, sets of records of classical music, operas, etc., had been sold, but, for some reason, no firm had thought of using the idea for records of light entertainment and so on.

Many manufacturers could use the idea. Can you? Think it over carefully before saying "No."

Does This Trend Mean More Sales For You?

HERE is a sales tip which may suggest ways to increase the market for your product or the chance to introduce a new line throughout your present retail outlets. *The demand for "period" furniture is increasing.* Young people now getting married are buying "Tudor" suites and other heavy types of furniture.

This information comes from executives in the furniture industry. Makers of period reproduction furniture are very busy and are expanding.

The news is significant to many manufacturers of furnishings and other household goods. Obviously there is a widening market for types of drapes, curtains, tapestries, floor coverings, silver-, glass- and chinaware, cutlery, table and other decorations, etc., that are in keeping with period furniture. It is a market worth investigating and, probably, worth developing.

Do Salesmen Make Good Sales Managers?

MOST business men say: "Not necessarily" in answer to this question, but it is seldom that they are able to quote any facts in proof of their statement.

In conjunction with several other important points the National Institute of Industrial Psychology have gone closely into this often-debated one of salesman to sales manager.*

The selling records of 183 managers in a well-known national sales organization were examined. The examination compared carefully their records as salesmen (i.e., before promotion to managers) with those of their managerial effectiveness since promotion. Result: *No correlation at all between previous selling ability and sales management ability.*

"So," says the investigator, "it is unwise to place undue stress on the sales record when appointing sales managers."

Here, then, is at least one scientifically investigated case that you can quote next time the point crops up.

*An Experiment in The Selection of Sales Managers, by J. H. MITCHELL, Investigator to the Institute, in "Occupational Psychology," Autumn 1928 issue. Price 5s.

Points to watch in your Car Insurance

By R. GRAY

THE compulsion by law for motorists to provide indemnity against personal injury to Third Parties is well known, and the normal Third Party policy covers this legal liability and also the liability for material damage to a Third Party's property.

Damage to the car itself and fire and theft risks, together with the Third Party section, form the basis of the comprehensive policy. Also included are many other minor risks and privileges which form part of the insurance companies' service to the motorist.

Private type cars are generally classified in three groups. Class one applies

to the motorist using his car solely for private purposes, and to certain privileged executives and directors who, although engaged in business, do not usually exceed the average mileage covered by the private motorist nor use their cars in such an intensive way as, say, a commercial traveller. Class two provides for business use, short of anything which may be termed commercial travelling or use in connection with the motor-trade, these uses being covered under class three.

These classifications, which are carefully detailed in the companies' prospectus, are as follows:

(Continued on page 30)

Spring Tonic for the Office . . .

NOW'S the Time to Administer It

These 6 Firms Show What Can be Done at the Following Key Points:

*Accounting and Recording
Correspondence, Circularizing, Dispatch
Inter-Office Communication
Filing*

By C. H. COSTELLO, A.I.C.S., A.C.W.A.

AS human beings, our nerve centres benefit at this point of the year more than at any other from a well-compounded tonic. A tone-up now puts us in good fettle for the rest of the year.

Exactly the same thing applies to that nerve centre of a business—the office.

An overhaul made *now*, and appropriate tonics applied, will be all to the good of the balance-sheet for 1939.

To assist in the diagnosis of your own office, however, perhaps the actual experience of a number of firms will give you the clue as to which of the seven principal classes of office work may need this special attention.

Simplified Accounting and Recording

First comes accounting, which, of course, covers book-keeping, billing, and statistics. No better example of an inexpensive tonic to this side perhaps exists than a record system used with marked success by a well-known telephone rental firm. It enables existing cards to be converted, without re-writing, to a time-saving visible system of such distinctive features that it cannot fail to effect a marked cut in the time spent on all reference work.

It includes a combined alphabetical-numerical index whereby each card is "found" by just touching a tab located by a number. Replacement of cards after reference is instantaneous because no special positioning is necessary. Where alphabetical reference is required, distinctive "canted" tabs enable quicker selection than by any other means.

Coupled to this is a system of hand posting which enables several records to be made simultaneously—the paramount advantage of machine accounting without the initial expense.

Next comes the recording of cash and credit transactions, involving multiple record work. Here we may cite the experience of a well-known manufacturing concern utilizing the continuous-form system for stock-room requisitions. At one recording are produced requisitions for purchasing department, stock-room, and to accompany the material.

The feature is not, however, the commonplace one of triplicate records by means of carbon copies, but the fact that, by the use of continuous stationery which permits of speedy feeding through the typewriter, a saving of one hour in three of working time is effected. Translated into cash, this means a reduction in the wages bill in a medium-sized concern of no less than £200 a year.

Your Working Day More Effective

In handling the mail—our third phase of office work—there is perhaps the widest scope for time- and money-saving by mechanical and methodical means. Since half a million business men "can't be wrong," the dictating machine takes a foremost place as a time and money spinner. It scores equally on the side of method and on the side of money. Each letter is written but once—on the typewriter. That in itself adds hours to the day. Since letters can be written more quickly, they cost less. Each one moves faster to the mailing chute



because work can be distributed and is not dependent upon individual transcription. Then consider the actual cost economy. The mere fact of abolishing shorthand saves at least three hours daily for every shorthand-typist in full work. That, combined with speedier transcription, means a *doubled* output, a saving of half the wages bill, and a corresponding reduction in capital charges for typewriters, desks and chairs, space, light, and heat.

Circularizing Costs Cut 35%

In circularizing, the most expensive item is invariably the enclosure itself; even a simple sales letter to achieve its purpose must have an engaging personality, and this costs money. Outstanding in this field is the office offset printing machine with positive feed. The basic printing medium, a thin metal sheet susceptible to all kinds of recorded impressions, easily handled, usable time after time, overcomes all the difficulties which formerly required the skill and experience of the specialist printer. The money-saving here lies not only in the prompt and inexpensive production of fine sales matter, it comes equally from the production of every kind of form for internal working.

The accountant of one well-known firm, sceptical of the results claimed, kept a close cost record, and after six months had to confess a clear 35 per cent cut in the printing bill.

Mail Room: £8 a Week Saved

As for dispatching, there are, of course, franking, stamping, and sealing machines suitable for all volumes of work. As an example of the kind of saving effected, there is in the mailing department of a large Birmingham concern an electrically operated sealing machine which will handle envelopes of any shape and up to three-quarters of an inch thickness. No careful feeding and very little attention is required whilst it is handling some 10,000 letters a day with an occasional peak load of

90% of Business Planning fails to fructify—

WHY?

Not because there is any absence of planning, but because the mechanism for detecting where the plan is breaking down does not exist.

Kardex is a system of control which enables you to detect where the plan is breaking down and to take corrective action.

When Kardex is used no deviation from the plan is possible without the control being aware of its cause and significance. Action is stimulated at and when action is most effective.

Find out what Kardex can
do for you TO-DAY.



Write for Booklet No. B.122

KARDEX, 1, LEADENHALL STREET, E.C.3
Mansion House 3921. Branches in all principal cities.

35,000. One hour and three hours respectively of actual running time suffices to see this sealing job disposed of.

The direct labour cost-saving to this firm is no less than £8 a week.

Saves Hours Per Week

No tonic will vitalize a medium-size business more than to provide the most efficient means of inter-communication possible—saving the many minutes a day spent in walking round for consultations, yet making consultations easier. By way of practical illustration a manufacturing firm, whose name is a household word, used formerly in the factory and office a manually operated telephone exchange of 197 lines which it owned and maintained. The average number of calls a week was 8,000. By changing over to an automatic system

of 250 lines, at no cost to the company beyond installation and yearly rental, traffic of 21,000 calls a week was handled. Thus cash was saved and quicker and more comprehensive working secured.

Another instance which comes to mind concerns a merchant shipper with world-wide connections. By engaging a coding clerk who knew how to go about the compilation of a special code supplement and had a real knowledge of the most effective working methods, he was able to reduce his annual bill for cables by some £200.

Files That Keep No Secrets

The real function of filing is, of course, *finding*. To have a filing system which yields up in quick time the records consigned to its care is a constant joy. To achieve an efficient state

in this department requires frequent inspection and the provision of proper equipment. The odd minutes otherwise wasted each day in searches may seem trivial until the biggest business deal of the year fails to be clinched because the data was not ready on the instant.

The curious investigator will observe that every office appliance firm has at least a dozen users of their particular item of equipment, whatever it may be, who take much legitimate pride before all-comers in the excellent results they are able to show. Moreover, the tonic effect of this pride is quite marked.

Should any phase of office work show signs of sagging, therefore, it can be asserted with confidence that, whatever the nature of the business, careful diagnosis and the application of considered method plus, maybe, some rational mechanization will produce cash value in results.

You Can Make Your Cables Cheaper . . .



“We Saved Over £250 in Twelve Months”

In too many offices cabling is Cinderella's job. “Just send this cable,” says the executive to his secretary, who has no special knowledge of cabling technique. Multiplied a few hundred times in a year, such an unstudied arrangement builds up a formidable item of office costs. This article shows how to trim that item down to a more economic level.

By R. G. FRANKLIN

NO matter how keen an eye is kept on the day-to-day costs of office routine it pays, every once in a while, to have a real dig into what might be called “standing charges.”

Soon after appointment to the office managership of my present company I carried out one of these investigations and was particularly struck by the money the firm was paying out for cables . . . about £2,000 for the year.

I knew we did a lot of cabling, but surely, I thought, this sum could be reduced. Personally, I did not know how to reduce it, so I called in an expert and asked his advice.

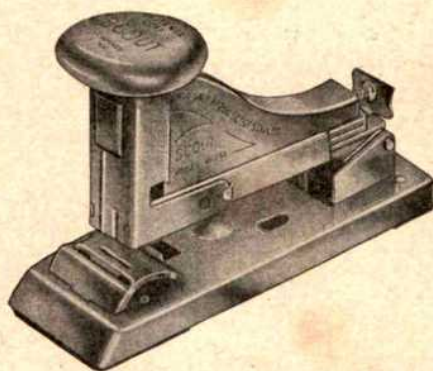
The information he gave was illuminating. Producing a cable company's tariff booklet and rule-book, he pointed out a dozen ways of cutting our costs. Boiled down, his advice was—get a cable tariff and rule-book and study them, or employ someone to do your cabling who does know them.

It happened that we were increasing our staff in the accounts department, so I decided to engage one man with expert knowledge of cables as an additional qualification.

I did find such a man who said he could reduce our costs by 10 per cent,

so we took him on and I watched his methods. But let him go on with the story just as he gave me my first lesson:

“First,” he said, “consider the rate



Latest in the range of Ace staplers marketed by The Standard Office Supplies Co. It is guaranteed for 3 years and is claimed to be jam-proof and clog-proof. In a recent test on 80 sheets of coated paper this machine put the special ‘Scout’ staples through to the full length of the legs, whereas straight staples buckled. Price of the machine, with 1,000 staples, is 10s. 6d.

at which you wish your cable to go. Find out which rate pays you best. Take, for instance, these two telegrams you have given me to send off,” he said, “the one to Western San Francisco the other to Maorigood Auckland, both have identical texts reading ‘If price not excessive buy 500 tons July delivery cable immediately.’ Now, at the full Ordinary rate the cost of the telegram to San Francisco would be 17s. 4d. and to Auckland 16s. 3d., but I shall not use that service because, owing to the difference in time between those towns and London, the Deferred ‘LC’ service will be good enough, and in each case the telegram will be delivered by the time your correspondents’ offices open. So, I write the prefix ‘LC’ in front of the addresses, telephone the Cable Company for a messenger to collect the telegrams, and the cost is 9s. 4d. for the San Francisco telegram and 8s. 9d. for the Auckland telegram, thus making a

(Continued on page 33)

UNIT CONTROL METHODS

For PURCHASING • STORES • PROGRESS • COSTING, ETC.



IN FACT
FOR ANY PHASE
OF WORKS ORGANIZATION

The COPE-CHAT range of Unit Record Methods can be effectively applied in any works, large or small

- so simple—juniors can work them
- so effective—large scale organizations use them
- so economical—small to medium firms cannot afford to be without them

To investigate costs you nothing. Why not write for details, gladly posted by return?

“PARAMOUNT” THE FOUNDATION OF EFFICIENT
FACTORY ORGANIZATION

REAL LEDGER CONTROL

*Your Ledgers may balance perfectly
but what about outstanding accounts?*

**COPE-CHAT VERTICAL VISIBLE
“DISPLAYS” THE STATE OF
EVERY ACCOUNT.**

It shows up:—

1. How many accounts are in default and for how long.
2. Which accounts are active in current month and should have statements.

It greatly facilitates Executive Control & Speeds up Posting.

**“ACCOUNTS CONTROL”
WITH COPE-CHAT METHODS AND EQUIPMENT
IS REAL CONTROL**

Full Particulars sent gladly by return

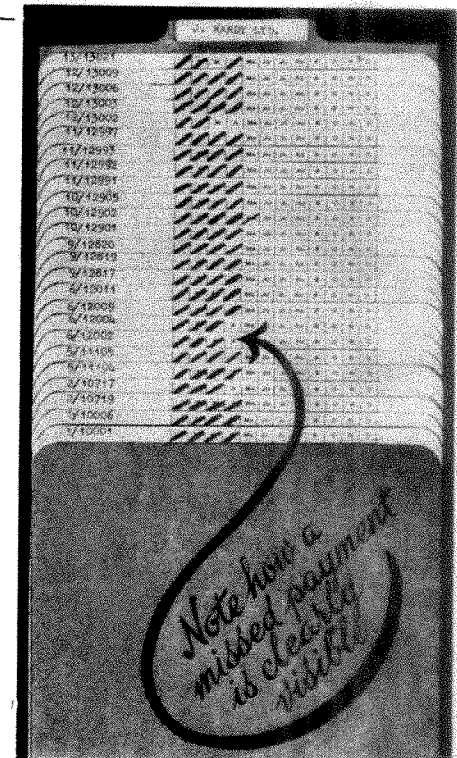


Illustration shows simple Hire Purchase Control System

THE COPELAND-CHATTERSON COMPANY LIMITED

EXCHANGE HOUSE, OLD CHANGE, LONDON, E.C.4 Telephone - CITY 2284 (4 lines)

Branches throughout the Provinces

Mechanized Accounting . . .

How to Apply it to Your Business

By A. F. LINTON

MANY firms that still employ the older systems of book-keeping have some difficulty in visualizing the application of mechanical accounting to their work.

Perhaps it is that the very word *mechanical*, or *mechanized*, has become invested with a meaning that makes the smaller concern somewhat afraid of this kind of equipment.

It is mainly to assist firms who experience this difficulty, as well as to explain in detail the whole broad system of mechanical accounting, that A. F. Linton has prepared a special introduction (see reference in the last paragraph of this article).

The accounting machine represents the logical progression from the era of the typewriter and adding machine, these two important office appliances being combined in various forms to produce the present-day "book-keeper." Some makes of machine combine these two fundamental components as such, whilst many employ the typewriter principle for the addition, subtraction, and printing of amounts.

Around these two basic elements, manufacturers have incorporated many ingenious devices for speeding up routine work and saving many unnecessary operations. All work such as writing dates, platen spacing, returning of carriage, etc., is done in most cases entirely automatically. In addition, they have produced machines which can be instantaneously adapted to practically every type of accounting work. That is to say, one machine may be employed on Invoicing, Sales Ledger, Purchases Ledger, Cash Book, statistical records, etc., only a very simple adjustment being necessary to change from one application to another.

The Human Element is NOT Displaced

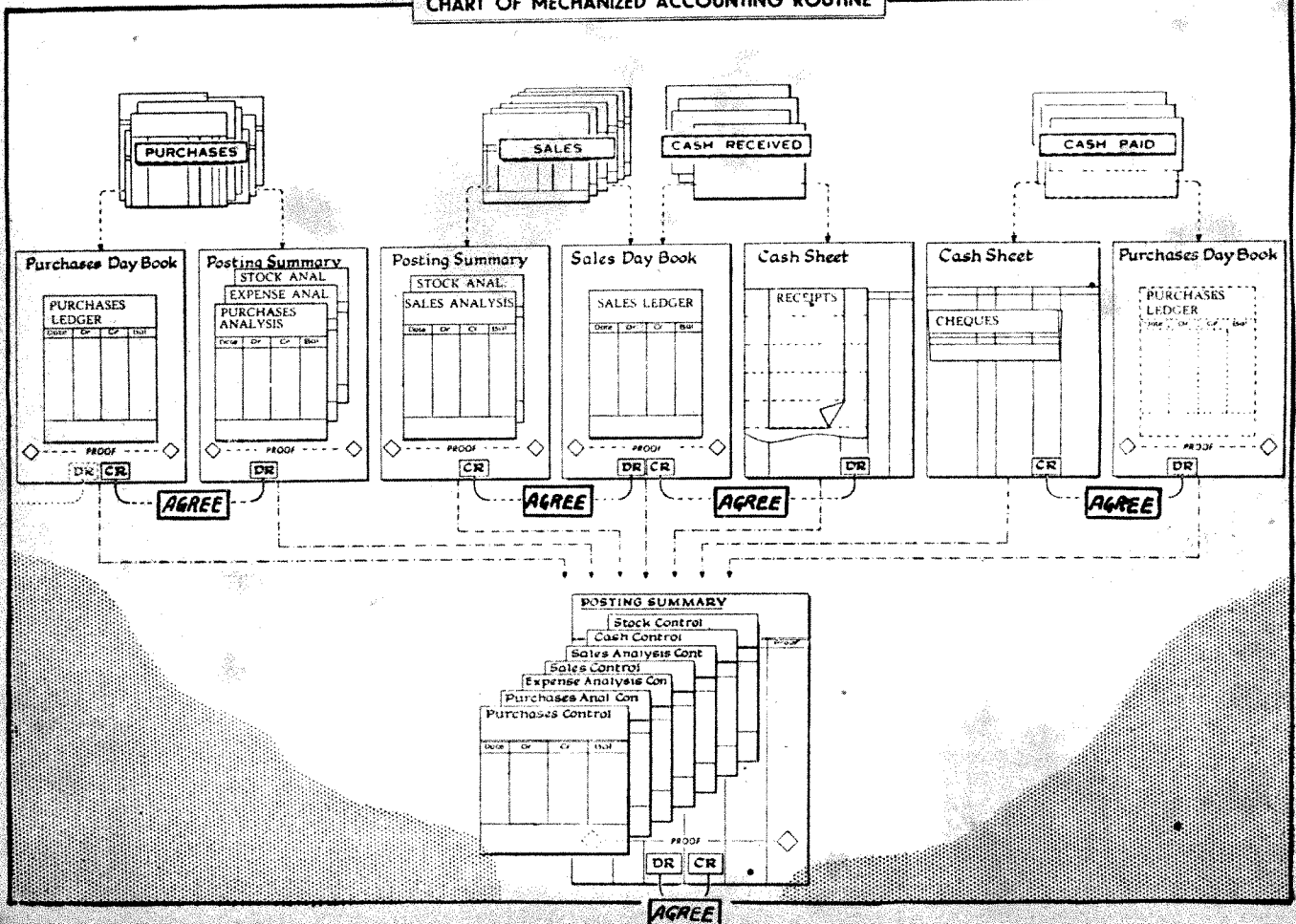
Book-keeping by machine methods does not mean that the human element is entirely displaced. On the contrary, this advancement enables the machine operator to obtain a clearer, wider, and more intelligent outlook on the principles of book-keeping by virtue of the fact that he or she has more time in

which to do a greater amount of work. Expressed differently, it means whereas it took a pen-and-ink clerk a certain time to gain a certain amount of experience, the machine operator, being able to do that same amount of work in a shorter time, gains the same experience far more quickly. What might be termed the drudgery of book-keeping is done by the machine, whilst half or more of a ledger clerk's time is spent in performing these operations by hand and brain.

As the machine carries out the work much faster and more efficiently than ever the hand ledger-clerk can do it, there is an inevitable saving in staff on the particular job mechanized. As it is this staff question which is so often used as an argument against mechanization, it would not be diverging too greatly to study the problem briefly.

It is readily admitted that a machine may handle the work of two, three, or four people. In some cases more than

CHART OF MECHANIZED ACCOUNTING ROUTINE



PRIMUS GIVES YOU 22 CARAT-TIME



The correct stationery for all such typewritten record-work of which a number of carbon copies must be kept is

PRIMUS CONTINUOUS STATIONERY

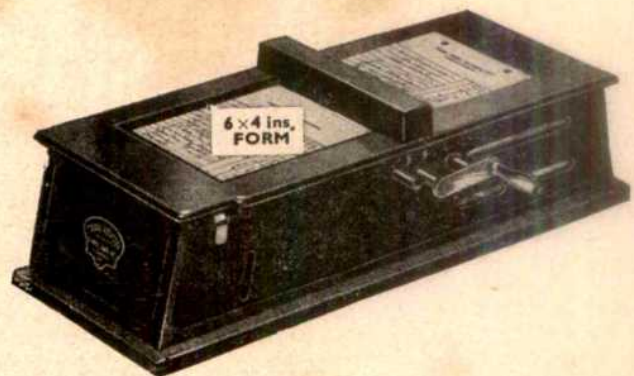
in conjunction with the continuous form attachment which fits any typewriter. Its use ensures the elimination of all non-productive operations such as insertion and removal of forms, inter-leaving carbons. By cutting out these irritating and fatiguing tasks, it preserves energy and concentrative powers, and also ensures 100% accuracy. You will find it justifies our claim to give you "22-carat" operator-time.

The value of time to you is governed by output in a given period.

You cannot get full value from your employees if part of their time is taken up in non-productive labours, however hard-working they may be.

Your stenographer, for example, may be conscientious and hard-working plus—and yet at least 30% of her working time may be dead loss to you.

Unless she uses the correct stationery, she is bound to waste that much time and energy on all repetitive record-work such as invoicing, works records, inter-department notes and records, etc.



FOR HANDWRITTEN RECORDS the PRIMUS Autographic Register for use with Continuous Stationery ensures the same speedy, smooth operation, while a copy automatically locked in the machine provides your auditor with a check on each transaction.

Carter-Davis Ltd.

Queen Elizabeth Street, London, S.E.1

Telephone - - - - - HOP 0204-5-6

this. In many instances, however, the machine is providing valuable records and statistical information which formerly were not obtained simply because staff costs would have been too high. In these cases, when a machine is installed, it is handling the work of several clerks, but, in fact, replaces none.

By taking away the routine work and drudgery of record-keeping, the machine releases labour for higher and more remunerative work—to carry out tasks requiring foresight, tact, and ability which can never be handled by machines. Under the system of manual posting, clerks are engaged on the same laborious work day after day—work which very quickly becomes monotonous. They are wearing out minds and brains on doing something which a machine can do better.

Machine methods also eliminate overtime and the continual late work caused by the necessity for checking back mentally-cast balances and columns.

The Great Point is : Proven Accuracy

The difference between the machine record and the hand-written document is, in many cases, remarkable. That produced by the machine is neater, its accuracy is mechanically proven, and the space taken up is less than that needed for the pen-and-ink equivalent. The latter advantage reduces the storage space required for cards and facilitates the actual handling of the records themselves.

A machine-posted account provides more information than a pen and ink entry because the machine computes and extends the new balance, or new total, on each account upon the completion of the postings. By hand methods, this balancing operation is carried out at regular intervals, giving rise to peak periods in the office and causing the staff to work overtime in order to bring the accounts up to date. This periodic balancing also creates large "checking units" in which errors have to be discovered and corrected.

With machine systems, most credit postings are printed in red and negative balances are designated with the symbol CR or OD. The CR is the commercial abbreviation signifying a credit balance, whilst the OD symbol is used mainly by the banks for an overdrawn account. All addition, subtraction, and date printing is done by the machine automatically during the posting operation.

A tremendous amount of time is saved by the ability of the machine to post more than one record at a time. The commonest example of this is to be found in sales ledger posting. Here it is common practice to post the statement, ledger card, and day book at one operation, the ledger card and day book being carbon copies of the statement.

A mechanical system can provide an almost 100 per cent proof of the accuracy of the work done each day, thereby eliminating the great amount of time wasted by pen-and-ink book-

keepers in calling back entries and searching for errors at the month-end.

In most retail businesses credit control constitutes a very vital part of their trading. It is essential to know how any particular customer's account stands when that customer is buying on credit. Machine methods offer the means of enforcing a rigid protection against accounts exceeding credit limits. This is made possible by the daily posting and automatic balancing obtained by machine methods.

Mr. Linton's book is in no sense a

text-book. It is a straight introduction into mechanical accounting that any business man can fully grasp in an hour. It is complete with diagrams and takes the reader through from Invoicing to Sales Ledger, Cash Book, Purchases and Bought Ledger, Stores Ledger, Nominal Ledger to the Trial Balance. Just 60 pages of the ABC to actual machine accounting.

The title of this rather "different" book is *Introduction to Mechanized Accounts*. It is published by Pitmans, and the price is 3s. 6d.

Pocket Adding Machine for Executives

MANY executives have to do some calculating in the course of everyday business, and not always in the office where figures can easily be done on a machine. At such times a new



blanks on which to make notes.

The calculating mechanism is of double-sided construction but totals are shown simultaneously on both sides. Addition and multiplication are done on the top side; subtraction on the reverse side. There are two models available, one for sterling and the other for numerical or decimal work. The capacity of the sterling machine is £99,999 19s. 11½ and that of the numerical 999,999,999.

In working the "Duplex" any movement in the wrong direction is automati-

Speed and simplicity are features of this pocket calculator. It is noiseless, results appear immediately and totals are always visible

vest-pocket calculating machine, known as the "Duplex," is very useful. Closed, it measures only 5½ in. by 3½ in. and easily fits into a coat pocket.

The machine can be used for adding, subtracting and multiplying. When it is closed it looks like a diary. When opened, on the left-hand side there is the calculator and on the right a pad of

cally checked and can be rectified at once without interference with the calculation in progress. The machine is simple and noiseless to work.

For business men who need only an adding mechanism there is a machine called the "sumax." Price of the "Duplex" is 35s., that of the "Sumax" 21s.

Raising Output of Office Workers

IT is estimated that the average office worker gives only 50 per cent of his possible capacity, and that a good average worker gives 65 per cent of his possible.

One reason for this poor standard is insufficient attention to personal selection. "Almost anyone can do office work" is the too-frequent attitude of executives when engaging office staff.

Remedy is to conduct proper ability-tests in the actual work the applicant will be expected to do. To reinforce this policy a bonus system or "payment by results" policy is effective.

In firms where a good bonus system is in operation increases of 33½ to 50 per cent in work output and personal efficiency have been recorded.

To-day, with so much office work mechanized, the bonus plan is comparatively easy to apply.

Detect Damp, Protect Stocks

SOME MATERIALS and stocks need to be stored in completely dry places, but it is not always possible to tell if a place is completely dry. There is available, however, a little instrument called a "Damp Detector" which can be used to keep a check on the amount of moisture present. You can tell at a glance whether or not the goods can be stored in safety in the place to be used. The instrument can also be used to keep a check on goods in store.

The "Damp Detector" is sold in two vest-pocket sizes, 2s. 6d. and 3s. 6d.



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"EXTRACT FROM TRUTH"



Premier

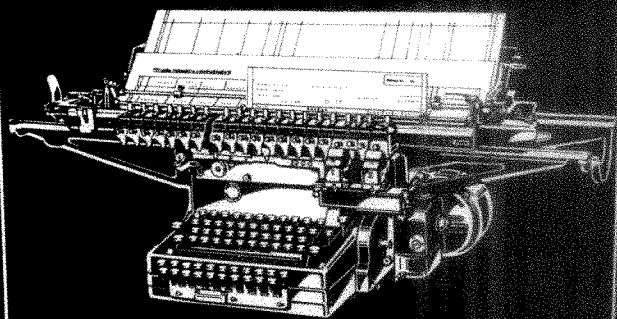
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This machine simultaneously computes horizontal and vertical figures. Proof of accuracy is automatic. Easy insertion and removal of forms permits preparation of related records in one operation. The fully electric operation gives high speed with minimum effort.

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Through Temperature Control You can Cut Costs, Improve Work and Output

MANAGEMENT'S big task to-day is admittedly that of *constructive* cost cutting, a policy which is not easily made effective. So often the decision to "use the axe" leads to cost cutting that impairs the firm's efficiency in all departments.

The most profitable economies, of course, are those where actual improvements in organization and performance follow a direct cash saving. But such ideal opportunities are not numerous, although they can be found in most businesses. A case in point is the control of temperature. In thousands of offices, factories, and other business premises the waste of heat, and other losses which result from inefficient heating, amount to substantial sums of money.

Room by Room Control Can Eliminate Waste

To-day such waste can be eliminated by means of room by room control of temperature. This can be gained by use of magnetic valves in any heating and ventilating installations. The result is (a) saving in fuel costs, (b) reduction in labour costs, (c) improved health of staff through maintenance of a steady temperature suitable to those in a room, and (d) increased working efficiency of staff because heating is kept always at "comfort" level.

The need for controlled temperature is becoming widely recognized by business men to-day. Experience and tests show that extremes in temperatures have an all-round bad influence on quality and volume of work. Moreover, people differ considerably on the question of "comfortable" temperatures. At 70 deg. F. some persons "feel stifled," while others flourish; some persons are "chilled to inefficiency" at temperatures which their colleagues consider "healthy."

Take the case of a company whose managing director insists on a temperature of about 70 deg. F. being main-

tained. As there is no individual room control of the heating system, temperature throughout the building is kept at 70 deg. F.—which is all right for the managing director, but all wrong for many of the staff. It makes them feel fatigued; they are uncomfortable and cannot concentrate on their work.

Then there are the cases where top executives believe in "fresh air." In keeping down the temperature in their rooms they cause discomfort throughout the building. As a result, in offices and factories in cold spells the staff wrap up in overcoats to keep warm. During the recent severe weather I heard of several such cases. The employees were too chilled to work at anything like the normal speed and accuracy.

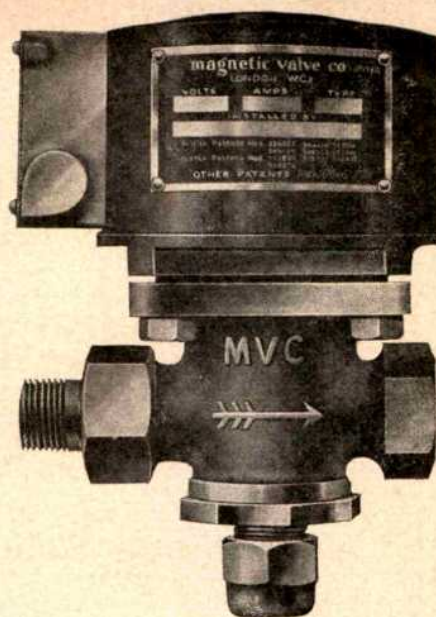
Temperature control by use of the magnetic valve system is an obvious answer to these conditions.

Let us see how magnetic valves work in an ordinary office-heating system where individual room control is needed if all the staff are to have "comfort level" temperatures.

Investigation may show a need for altering the existing arrangement of radiators and so on. For example, before a room can be given controlled temperature, it may be necessary to place the radiator in a different position or to introduce an extra radiator. That, however, is a matter which can only be decided by a firm of heating specialists.

This Slight Variation Helps Staff Health

When it is decided that the heating equipment is adequate and arranged satisfactorily, valves are fitted to the heating system pipes in each room, together with a thermostat which is connected with the valve. The figure of the desired temperature—say, 65 deg. F.—is then set on the thermostat. When the temperature of the room falls below or exceeds this level, the thermostat automatically operates the valve



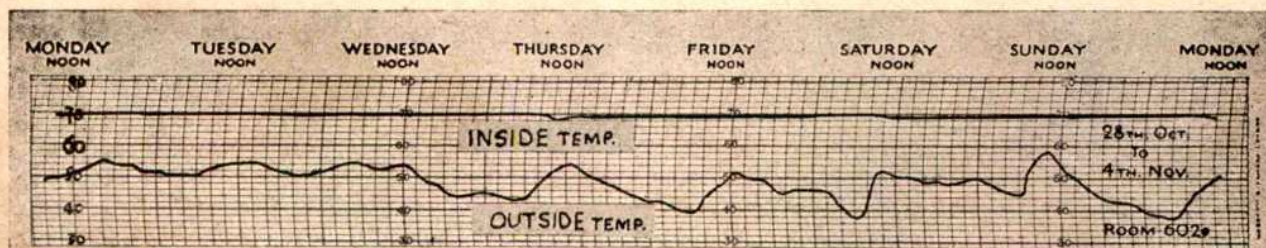
which turns on or cuts off the steam or hot water.

By this means all offices and workshops can be kept at a temperature which suits staff occupying them. The variation in control is about a degree below and above the predetermined figure.

Temperature control, of course, eliminates waste of heat. The fuel economies thus effected may be as high as 30 to 40 per cent. The figure varies in each case as the circumstances differ so much. No percentage of saving can be stated until a job is completely investigated, but it can be said that in almost every instance the economy is sufficient to pay for the installation over a short period. This is true of control of temperature in any heating, ventilating, or hot-water system generally used in business premises.

There are several types of magnetic valves available, each of which is constructed for a special function. The decision as to which is necessary for any one installation and for what purpose is a technical matter to be decided by engineers. From the business executive's viewpoint, the important factors are the constructive cost-cutting and the improvement in working conditions and efficiency of the staff which result from use of the valves.

These management considerations justify full investigation into temperature control. As a first step, you should write to the Magnetic Valve Co., Ltd., Bush House, London, W.C.1, and ask
(Continued on page 40)



Temperature control, room by room as shown here, helps to keep staff healthy, reduces absenteeism through minor complaints and leads to higher output of better work

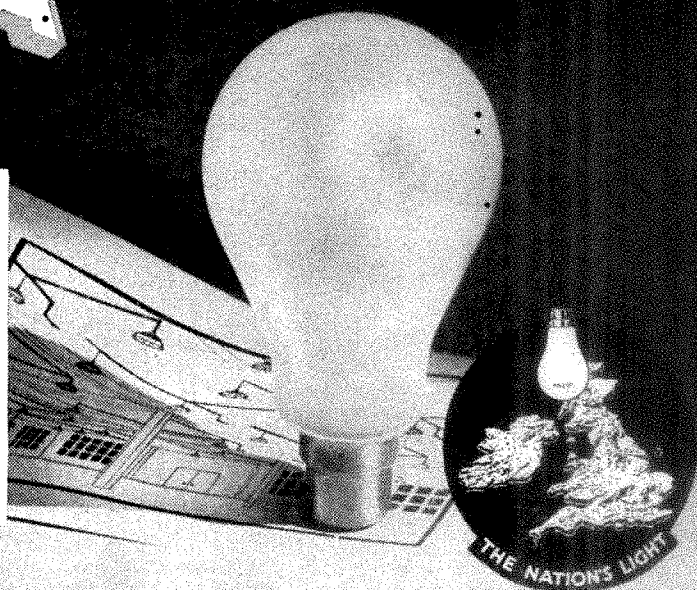
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MAZDA LAMPS

BTH Lighting Engineers will be pleased to assist executives in organising lighting installations in accordance with the requirements of any particular industry. The famous Mazda Lamps and Mercra Electric Discharge Lamps, together with the correct BTH industrial lighting equipment, offer an excellent solution to practically all such problems. You may draw freely upon the experience of our experts in this connection.

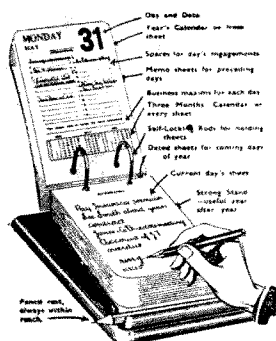


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Post this Coupon
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Use a System Desk Calendar yourself—place one on the desk of every important member of your staff. See from the accompanying illustration how simply this unique device operates—and yet how complete, automatic and accurate is the service it renders you. At the top stands the day's date in large type; below it, an appointment sheet for the day marked off by hours and half-hours; then comes a convenient Calendar for the current, past and next months; below is a big sheet for the day's memos, notes and reminders; there is one of these large sheets for every day of the year, giving ample room for all records. As one long-time user says, "It is the one indispensable desk assistant for every business man." Models with 1939 sheets are now ready.

**To: SHAW PUBLISHING CO., Ltd.
6 Carmelite Street, London, E.C.4**

Please send me, without obligation, full particulars and illustrations, with prices, of the System Desk Calendars.

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Address

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*Half the price of new
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EFFICIENCY IS CUT IN HALF IF OLD DRAUGHTIES ON YOUR STAFF



Working efficiency drops with the temperature; chill air destroys concentration and sometimes leads even to this:

"Saying that it was too cold to work, 50 men in the jig and tool drawing office at the—— factory in Birmingham stopped." ("Daily Herald," 20th December, 1938.)

BANISH HIM WITH

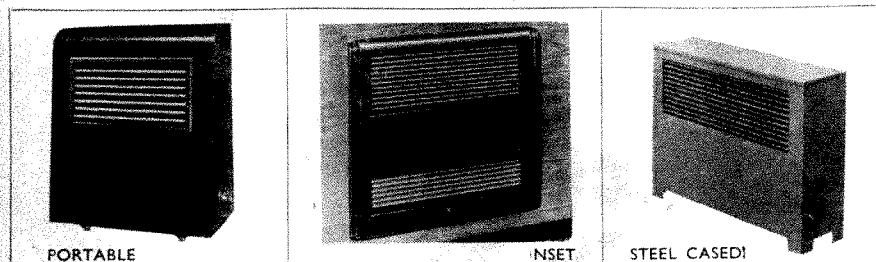
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THERMOVENT is the *new* form of heating, warming the air, by convection, to give evenly distributed heat at all levels and at all distances from the heater. Built-in thermostat control, *affected only by air-temperature*, keeps the atmosphere at a healthy, constant level of warmth, in addition to saving current. Initial and upkeep costs are very low and various types are available to suit all working conditions. Ideal as main or subsidiary heating, for constant or occasional use. Send for full details to:—

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MAXIMUM EFFICIENCY AT MINIMUM RUNNING COSTS



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of
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EQUIPMENT

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A FREE SERVICE

Subscribers are entitled to free advice on any problem arising in their own businesses under the following heads:

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| Management (budgeting, costing, statistics, stocks, personnel control, etc.). | Transport (internal and external, costing, maintenance, etc.). |
| Office equipment (the use of every kind of appliance, system and method). | Lighting (to reduce costs and increase efficiency). |
| Machine Acctg. (any special problems). | Insurance (business and personal cover, Factory Act, etc.). |

Service Department

BUSINESS

Whitefriars House, Tallis Street, E.C.4

Building Men to Build the Business

(Continued from page 8)

We want every employee to know not only as much as possible about his own job, but also as much as possible about his colleagues' jobs.

In this way everybody gains in knowledge, experience and, therefore, all-round capability. Even more important than this, however, is the fact that when every worker fully appreciates the duties, responsibilities and difficulties of his fellow-workers a state is created which is the very foundation of the intelligently co-operative spirit. A condition is induced wherein constructive, smooth-running work is the natural thing instead of there being the red tape and obstruction which is the inevitable outcome of insularity.

Our Staff Never Work in The Dark

As I mentioned just now an advertising agency must know and understand a client's business. In addition, therefore, to educating our staff in the routine and technical aspects of their jobs an important part of our scheme is in this direction of acquainting them with our clients' business.

We arrange to have our staff conducted on educational tours of clients' factories. In this way they see every process of manufacture of the goods which it is their job to assist in selling. When, therefore, the ideas-men, the copywriters, and so on set about their creative work they have a real and authoritative foundation on which to build.

But Education Is Not Nearly Enough

In creating and fostering enthusiasm, knowledge and co-operation among employees it is not enough, not nearly enough, merely to institute methods of tuition and examination.

Employees are first and foremost human beings. Their personal welfare therefore comes before technical education.

In dealing with this vital aspect I put

VENUS PENCILS

VENUS PENCILS are incomparably smooth and long lasting, their standard of quality never varies.

MADE IN ENGLAND
KNOWN THROUGHOUT THE WORLD

If you will state the nature of your work and choose two different grades which you think most likely to suit, we shall be very glad to send you samples to try.

From 8b softest, to 9h, hardest

VENUS PENCIL Co. Ltd., LONDON, E.5

first in importance the careful *selection* of staff.

Staff Selection is of Vital Importance

We never begrudge the time spent on deciding whom to employ. I believe more staff troubles in average business firms are the outcome of faulty selection than arise from any other single cause. We choose our employees on a basis of disposition and character as well as on qualification for any particular work. We pick for *permanence*, not for economy or temporary convenience. We are not dazzled by "stars" who may approach us from other organizations. Stars are usually temperamental. We prefer to build quality on a durable foundation rather than to acquire, ready made from outside, super-brilliance that may be of an embarrassingly inconsistent nature.

Remuneration Should Back Up Right Selection

Having selected the right people we consider that we should make them feel secure by paying salaries and wages at least as high as they could obtain in similar jobs elsewhere. But even this, plus every opportunity for further advancement, we do not consider the end. We believe that intelligent and enthusiastic staff should share some of the profits that their work creates. We are now, therefore, planning a profit-sharing scheme.

Working Conditions Must Save Time, Money and Tempers

Working conditions, too, is a matter which we realize has a far-reaching influence on staff welfare. Our offices are designed and laid out to give the maximum amount of light and freedom of movement. It is costly to a business, as well as inconsiderate to work-people, to have energy absorbed, tempers frayed and attention distracted by badly laid-out or inferior equipment.

When it comes to promotion it is our aim to advance our own employees in every case that is possible. Apart from the satisfaction and constant incentive which this policy holds out to the staff, we infinitely prefer to move into higher positions our own people who are already fully trained in our own carefully planned methods.

Worry About Illness is Entirely Removed

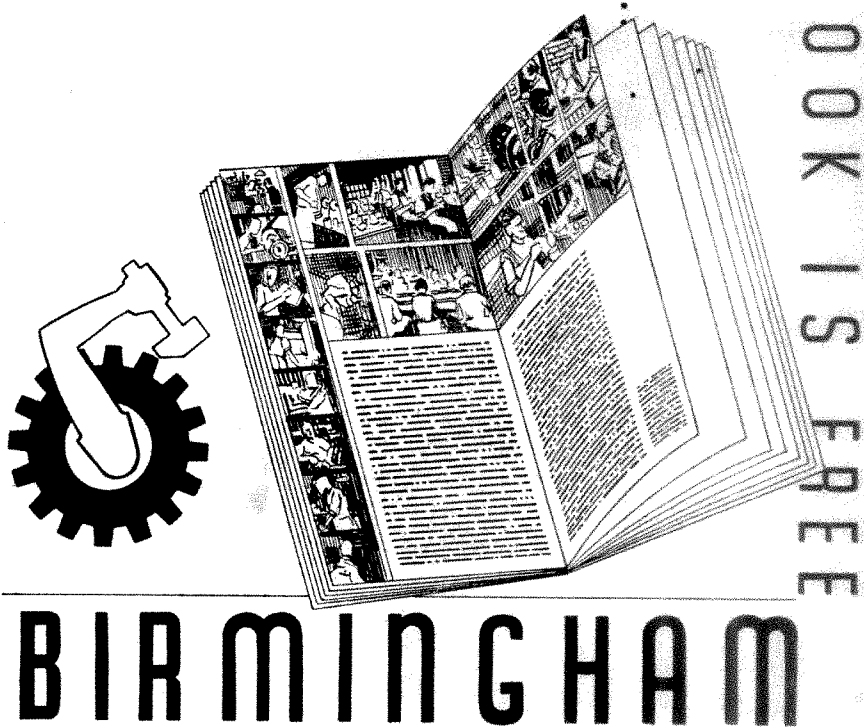
Every employee, at some time or another, is liable to illness. As we, the employers, consider that staff welfare is our responsibility we pay for all medical, surgical and hospital attention of which any of our employees may become in need.

But we do not think it sufficient to relieve the employee of possible worry about only his own illnesses. Worry, and its consequent effect upon work, can also be induced by illness of his family. So we include his family, too, in our financial responsibility.

In doing this we believe that any increased liability is more than offset

AN INDUSTRIAL IMPRESSION

Within the covers of this booklet, Birmingham seeks to condense an impression of its 1,200 trades and the thousands of types of its manufactures. See England's Second City with its coat off and making the products it sends to all parts of the world.

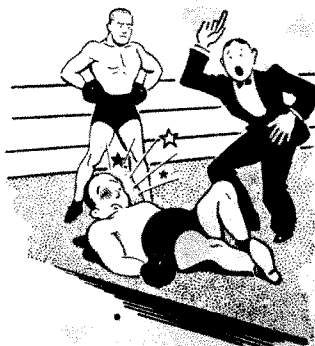


And besides being England's greatest industrial centre, Birmingham is a noble city and the home of the Chamberlain tradition of civic progress. The manufacturer with his factory in Birmingham shares its prestige and is in the centre of industrial progress. There are publications, free for the asking, to be obtained from the City of Birmingham Information Bureau, The Council House, Birmingham, 1.

Information also obtainable through the Travel and Industrial Development Association of Great Britain and Ireland, 29 Cockspur Street, London, S.W.1; British Empire Building, Rockefeller Center, New York; 28 Avenue des Champs Élysées, Paris.

Taking The Count

Counting every minute of every working hour and keeping a correct record is the only method of success in business. That's where we can help you. The GLEDHILL-BROOK TIME RECORDING AND COSTING SYSTEM will prevent waste in all departments of every business. Please write to us for details.



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38 EMPIRE WORKS, HUDDERSFIELD



LANCASHIRE

AN ASSET in your CAPITAL ACCOUNT

In these days of fierce competition no business or industrial undertaking can afford to neglect any factor which might contribute towards its ultimate success.

Every available asset *must* be capitalized—and an advantageous factory location is of such importance that it must rank high in any list of assets.

An unbiased examination of Lancashire's industrial record cannot fail to convince you of the area's inherent ability to cater successfully for the ever changing needs of modern industry.

Since 1931 more than 600 new industrial establishments and 200 factory extensions have been started in Lancashire. There are now

2,500 more non-textile factories, while over 200 redundant textile mills have been converted into factories for an amazing range of products. Employment for more than 25,000 work-people is being provided by enterprises introduced by the Lancashire Industrial Development Council. These facts indicate that Lancashire is as much a vital force in the country's economic life now as it ever was in the days of the industrial revolution. It is a force which must strengthen the hands of all those associated with it.



Inquiries for information and expert advice on available factory locations are welcomed and treated in strict confidence.

J. BENNETT STOREY, General Manager,

LANCASHIRE

INDUSTRIAL DEVELOPMENT COUNCIL

SHIP CANAL HOUSE, KING STREET, MANCHESTER, 2

Preliminary information obtainable through:—

THE TRAVEL AND INDUSTRIAL DEVELOPMENT ASSOCIATION OF GREAT BRITAIN AND IRELAND, 29 Cockspur Street, London, S.W.1, British Empire Building, Rockefeller Center, New York, and 28 Avenue des Champs Elysées, Paris.

by the improved morale throughout the whole of our staff. And, if I may mention it here, we feel it is an obligation that we should rightfully undertake.

We expect the very best from our staff; it would be altogether inequitable if we ourselves did not first provide the best within our power. That is logical: and it is good business, because business is not a mere matter of labour and wages, it is a matter of human relationship, man to man.

Your Car Insurance

(Continued from page 17)

tuses, have been arrived at as a result of experience and statistics which show the incidence of claims over a detailed classification of many thousands of risks.

Premiums are based on these and such factors as the previous experience of the driver, the size and type of car, and the district in which it is used, all of which have an effect on the probabilities of accidents in connection with various types of risk. The fact that the great majority of companies underwriting motor insurance arrive at approximately the same general basis proves that premiums are at their lowest economic level.

Quick Settlement of Claims is Important

The settlement of claims is the aspect of insurance companies' activities to which most attention is paid by the public. When the car itself is damaged, the essential thing is to get the vehicle back on the road as quickly as possible. Most companies allow repairs estimated to cost up to £15 to be put in hand at once, subject to an estimate being sent to them at the same time. When repairs are likely to cost more than that sum, or when new parts are necessary, the company naturally likes to have an opportunity of checking the estimate and possibly inspecting the damage before work is started. Most companies have a staff of engineers ready to make these inspections at once, and a telephone message from the repairer is in most cases sufficient to ensure immediate attention.

Third Party claims are the most difficult to settle, and the question of

THE ACE SCOUT STAPLING MACHINE

It Staples—It Pins—It Tacks
WORLD'S BEST VALUE
Guaranteed for three years

RETAIL
PRICE
10'6
INCLUDING
1000
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- All-steel Construction
- Cannot Jam or Clog
- Secures up to 50 Documents

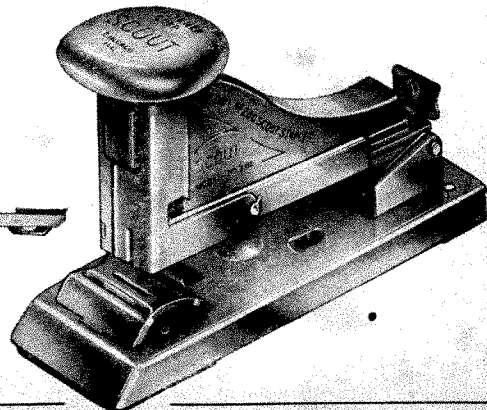


Tacking Position

STANDARD OFFICE SUPPLIES CO.

9 Lovell's Court · Paternoster Row · London, E.C.4

Telephone: City 7211 (4 lines)



liability is becoming increasingly difficult to determine. The company and its assessors, it must be remembered, have a lot of experience behind them in dealing with such claims, and their opinion is usually sound in regard to this question of liability. Only a small proportion of cases are heard at the courts nowadays, for the law is an expensive way of settling arguments, and in many instances, although the company might win a case, the opposing side might not be in a position to pay the costs. So when your insurers make what may seem to be an unnecessary payment to a Third Party, they have done so because it is

Trade Press Advertising

What It Does for Us

"I don't know why the pundits of advertising are still arguing about whether trade press advertising is worth while: for our part, we have no doubts about the matter. . . . Our attitude towards trade press advertising is not strictly orthodox. We never really expect it to produce inquiries. But what we have proved—and that right up to the hilt—is that when we cover a given field of prospects by advertising in its related trade press, our salesmen do definitely receive a friendlier welcome, and carry out a far more potentially productive interview. And this is really what we want our advertising to achieve."

N. A. HOWELL-EVERSON,
Masson Seeley & Company Ltd.,
in a recent speech.

the least expensive way of settling the claim. If an insured had been handling the matter, he would probably have found himself forced to the same conclusion in the long run. Recent legislation, too intricate to mention here, has enlarged the grounds on which claims can be made, and all these additional liabilities have to be taken into account when the company makes a settlement.

Before a company may transact motor business, it has to deposit a statutory sum with the Board of Trade, but this is not sufficient to meet all the claims which may be made upon it, and only the assets appearing in the balance-sheet can provide a general guide to a company's stability. Several comparatively recent instances of the failure of a company will come to mind, but possibly unsound underwriting was a large feature in those cases. The effect of the failures was to leave the policy-holders uninsured and liable themselves for any damages that might be awarded against them.

When choosing an insurance company, therefore, it is wise to consult a qualified insurance broker, unless you have knowledge of a company, on two important points:

Are they financially sound and reputable? •

Have they a good record for the prompt service and settlement of accidental damage claims?

SHANNOGRAPH

**FLAT
TOP
FILING**

FULL VISION

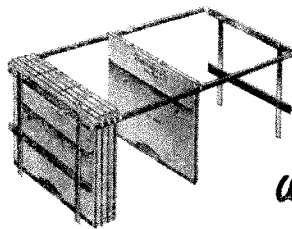


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The cost of claims tends to increase and the road-accident figures show no appreciable reduction, so that premiums cannot be reduced. In fact, with the additional responsibilities being placed upon companies, there is a strong probability that they will increase, and it is interesting to note that a recent comparison showed English motor premiums to be very substantially lower than those of the United States and Germany.

Most business firms are naturally anxious to reduce their insurance charges without sacrificing the security of their cover or the service and attention given

to their claims, and there are various methods by which this can be effected.

By agreeing to bear the first portion of any claims, say £5, the premium is reduced and the no-claims bonus is not sacrificed for the sake of, perhaps, one small claim. Where a large number of vehicles is insured, a "Fleet" reduction is often allowed according to the claims experience. With a view to keeping a good record, this reduction, or the reduction for bearing the first portion of claims, may be passed on to the drivers of individual vehicles in proportion to their freedom from accidents.

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Supersede
Manifold Books

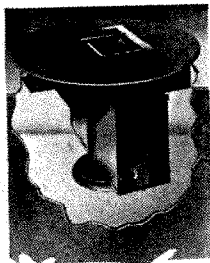
WHEREVER records with carbon copies are kept, ALACRA Registrators save time by bringing maximum speed and convenience to the writing of entries.

There is an ALACRA Registrar for every record-keeping purpose—from the large desk models illustrated here down to light, handy portables for use wherever records must be written away from a desk.



ALACRA CASH DRAWER MODELS KF and MKFCD. Drawer operates automatically as forms are ejected and/or filed.

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How 'Imperial' Chemicals Control their Salesmen's Car Costs

liable to vary considerably when such work is entrusted indiscriminately to small and independent garages.

Instructions are issued, therefore, that in the event of any car needing skilled attention, such work shall be carried out in an authorized service depot with the aid of proper equipment and mechanics experienced with the make of car in question, who can, if needs be, give advice on matters which may be of great help to the representative concerned.

(Continued from page 13)

and oil consumed for private travel, the latter charges being based upon the recorded costs for the particular vehicles.

Since its adoption, this method of charging for private mileage has proved satisfactory to all concerned, having a particularly valuable influence upon the accuracy of returned running costs for normal business use.

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This type of detail expense sheet is kept for each car. Individual car costs are then transferred to the Master (Total Fleet) Sheet shown on pages 13-14

Particulars of all car-running costs incurred by sales representatives are entered on printed forms to which bills, referring to the services rendered by the garages concerned, must be attached. This again is a very simple form providing all essential information and leaving no possible loophole for omissions or mistakes.

Each car expense-sheet is scrutinized carefully before being handed over to the records clerk at head office for subsequent entry of the items in a book tabulated to show the costs of each individual car during its twelve-monthly period of service. Total fleet costs, including running, variable and fixed charges, are entered on the master document, described as the motor-car expenditure sheet, which is completed every six months.

When Cars are Used for Private Purposes

Members of the I.C.I. sales staff in charge of the company's cars have special privileges as to the use of such cars for private purposes. The arrangement adopted in this case is of great interest and, while solving a somewhat difficult problem, acts as an incentive for each representative to run his car economically at all times.

Originally the I.C.I. made a nominal charge at the rate of 2d. per mile when members of the staff used the cars otherwise than on the company's business. That system, however, has since been replaced by an annual premium of 10s. per horse-power, in addition to which the representatives pay for the petrol

Reference to the chart showing the comparative costs and performance of car types operated by the I.C.I. will reveal some important facts. It will be noted that with regard to petrol consumption the figures generally are less favourable than those usually claimed by the manufacturers. It must be borne in mind, however, that a sales representative, from the very nature of his work, makes heavier demands upon his car than does the average owner-driver.

The Chart Analyses These Important Figures

With regard to the oft-raised question: "How much does a car cost to run?" the I.C.I. chart shows that a 10 h.p. model will cost from 0.99d. to 1.20d. per mile according to make, while corresponding figures for cars of 12 h.p. vary between 1.18d. and 1.32d. per mile. Cars of 14 h.p. will cost anything between 1.67d. and 1.76d. per mile. The figures in all cases are for running costs only and do not include the corresponding standing charges.

Repair costs show similar variations, and from the information thus provided by the I.C.I. it is obvious that careful analysis of fleet costs is of the utmost importance. In other words, it is not safe to assume that car costs are fairly well stabilized in the respective h.p. categories, for variations to the order cited may involve fleet owners in unexpected expense, avoidable only by adopting a systematic control of costs such as that outlined above.

Make Your Cables Cheaper

(Continued from page 20)

saving of 15s. 6d. on the two telegrams.

"A still cheaper service called the 'Letter Telegram Service' is available to most destinations, and this I use for non-urgent telegrams containing more than about 16 plain language words.

"According to destination the prefix NLT or DLT must be used, and the telegrams are delivered the following morning in the case of NLT and the second morning after handing in in the case of DLT. But I do not use this service for non-urgent plain language telegrams containing less than about 16 words, as NLT and DLT telegrams are subject to a minimum charge for only five words.

Address Your Telegrams Properly

"Always make addresses as short as possible. For example, join up into one word such names as Stjamesroad, Ruedelapaix, Eastfifthstreet, etc., which in addresses and in plain language telegrams are counted at the rate of fifteen letters to a word. Similarly, names of ships, *Dovercastle, City-of-boston*, etc.

"Another point: Find out the correct telegraphic description of towns to which the telegrams are destined. The Cable Company will always say how it appears in the Official List of Telegraph Offices. For example, Wellington, New Zealand; Wellington, India; Sea Point, Cape Town; San Jose, Costa Rica; Brooklyn, New York; Perth, Western Australia; Port of Spain, Trinidad, should be written as: Wellington; Wellingtonindia; Seapoint; Sanjosecostarica; Brooklynny; Perthwesternaustralia; Portofspain.

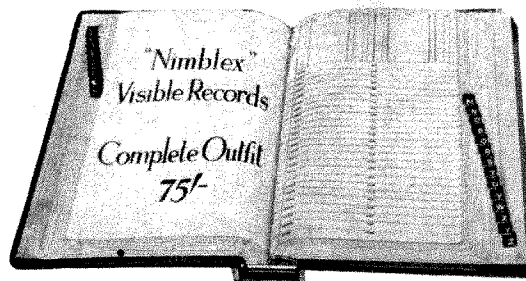
"The text of telegrams also should be as concise as possible. Here is an example of an almost criminal waste of words:

"Blomberg Greenwichstreet Yonkersny—Referring your telegram 19th accept quality two hundred fifty seventeen pence C.I.F. shipment July F.O.B. Liverpool five per cent commission.

"The twenty-seven words in this telegram can be reduced to seventeen if it is sent in plain language, as follows:

"Blomberg Greenwichstreet Yonkersny—Your telegram 19th accept quality twofifty (or 250) seventeen-pence CIF shipment July FOB Liverpool 5% commission.

"Of course the telegraph counter clerk is always ready to help. His



- Visible Records in a Loose-leaf Book—25 records to view at each opening.
- Visible signalling by markers or symbols.
- Specially constructed FLAT-LIE Index Sheets which ensure an even writing surface.
- Easy to write in.
- Portable and as secure as a bound book.
- Simple to operate.
- Save space, time, and money.

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Special Rulings to order.

To: Moore's Modern Methods, Ltd., 12 St. Bride St., London, E.C.4

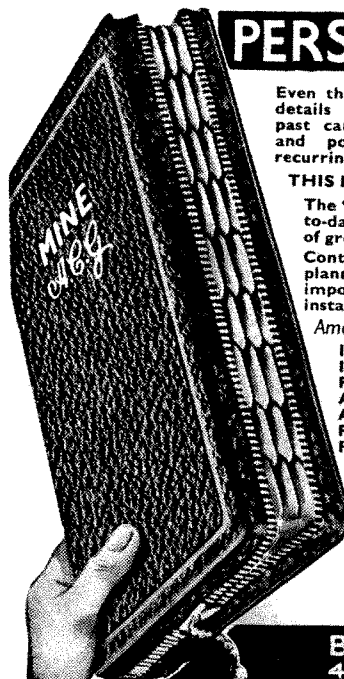
SEND
FREE

☐ Booklet No. A281/278—all about the "Nimblex" Visible Records.

the item(s) ticked.

☐ Catalogue No. A281/24—a 160 page Book of Loose-leaf Methods for business executives.

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Even the man with a GOOD memory cannot expect to remember details of income-tax returns of previous years, particulars of past car insurance claims, dates of all employment, with whom and positions held — all anniversaries and birthdays, or recurring payments as they become due, loans made, etc. etc.

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The "Book of a Lifetime"—a Recorder that demands information to-day which although perhaps you do not realise it now, can be of great value at some unforeseen moment in the future.

Contains 180 heavyweight pages, each a gem of clever planning with a particular place for any and every item of importance in a man's life — and a flick of the finger instantly finds any item tomorrow or many years hence.

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ADDRESSES
RECURRING
PAYMENTS

EDUCATION
EMPLOYMENT
INCOME TAX
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HEALTH

HOLIDAYS
PASSPORTS
BANK A/C'S
LOANS
SERVANTS
MOTOR CARS
Etc. Etc. Etc.

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Send Postal Order and state initials in CAPITALS.

Mark your envelope 'Dept. B.S.'

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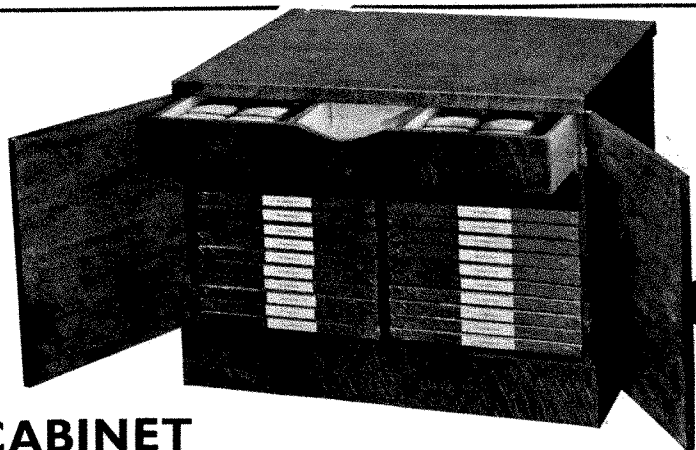
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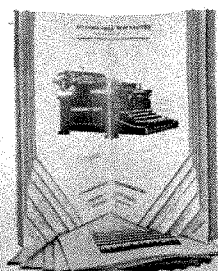
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THIS CABINET giving Protection and Control COSTS YOU NOTHING ★

A greater sense of the value of typewriter supplies and consequent greater care in their use results from installing this Typewriter Supplies Cabinet.

WRITE FOR THIS NEW BOOKLET



1. Do you want more and better results from your typewriters?
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3. Do you want clearer carbon copies than you are getting?
4. Do you want out-going letters to look more technically perfect?
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BOOKLET TELLS
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Abbey 1488

instructions are to assist customers and to check cables for superfluous words which mean excessive expenditure. It invariably saves time, however, and relieves the Cable Company of work to have your message *correct* before handing in.

"Another point is that it is cheaper to a few places such as Egypt, Syria, and Ceylon to insert on the message the free routing instruction 'via *Wireless*,' thus saving a few pence per word.

"I always make sure that I have indicated plainly on the form the class at which I want the telegram to go forward, also by which route it is to be transmitted if more than one is available. This is particularly important if my telegram is to be handed in at a Post Office Telegraph Office. Counter clerks are not mind-readers, and if it is necessary for them to ascertain doubtful points afterwards that means delay to my telegram."

It is now twelve months since my firm engaged the clerk who also understood cabling. We are doing more business than formerly, yet our cable bill for the year stood at £1,750, a 12½ per cent reduction. The cable clerk cost us £30 a year more in salary and saved us £250 in costs.

'Blind' Driving May Save You Time and Money

DO you know how much it costs you to take a wrong turning when driving? Probably not. But it means lost time and increased costs. The pence involved may be insignificant but the time lost is often valuable, sometimes vital.

That is why a new product, the "Heayberd" fluid car compass, is of interest to executives who use cars. This compass shows all the time the direction in which you are going, checks the route at each turn and enables you to anticipate signpost directions at forks and junctions.

The compass is made in three models, prices 7s. 6d., 12s. 6d. and 21s., respectively. It is designed on aeroplane-type fluid principle and is fitted to the wind-screen with a rubber vacuum cap. The more expensive models are compensated against magnetic interference.

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'Short-Cuts' Boost Rate of Output in this new factory

EVERY successful business has some points in policy and practice which can be adopted with good results by other firms. Sometimes it is a problem of management, sometimes a technical question or a point about personnel. But whatever the matter may be, there is a *principle* involved, and that principle is usually common to all businesses.

Take the example of Aidas Electric, Ltd., a London firm manufacturing automatic electric water heaters. They have been progressing with something like 50 per cent increases in sales year by year, so they have built themselves a big, new factory at Greenford, Middlesex. Here, under the ideal conditions of a well-planned modern factory and plant, they have got "flow" production and facilities to expand output as sales increase.

Now the routine processes of water heater production are—routine. They do not suggest lots of new ideas and methods which could be adapted in factories of other firms. But there are one or two points worth special mention.

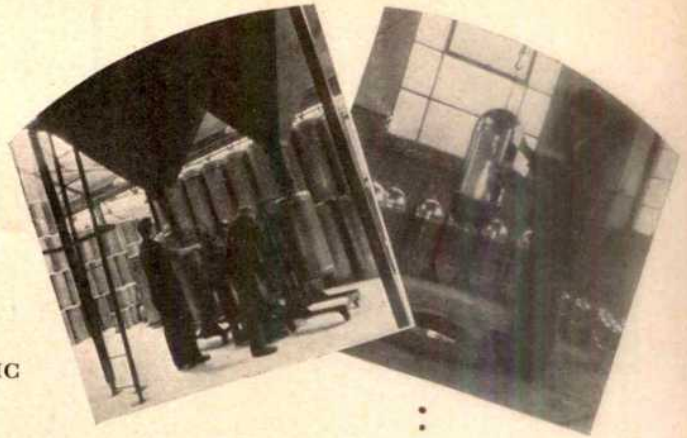
Special Plant Improves Output and Product

The first of these is the tinning vat. This has been built to the special design of the factory executives. It provides for total immersion of completed containers in pure molten tin. The vat is electrically heated, and the temperature is automatically controlled.

Why have the firm gone to the trouble of building this special vat? Because it does a better job than is done by existing plant on the market. Quite rightly, the company are proud of the quality of their products. This tinning vat helps to maintain that quality. When containers are totally immersed in the vat a degree of fusion with molten tin and the container metal takes place. Result: the tin coating never chips off. That factor is a point of quality about the product; it helps the salesman get orders; it satisfies customers.

The second feature is an automatic hopper and filling machine. Granulated cork is used for insulation between the water container and the outside casing. The hopper was designed by the firm's technical executives to fill automatically the cork into the space between container and casing. As the cork is poured in, the water heater is held on a vibrating machine, which results in tight packing of the cork.

from
**AIDAS ELECTRIC
LTD.**



Here, again, the product is improved. Mechanical packing is 20 per cent more efficient than is the hand method, hence a big improvement in the heater's insulation qualities. At the same time labour and other costs have been cut through speed-up in output.

These two examples—tinning vat and filling hopper—illustrate the value of three principles in factory and business management: (1) that the basis of sales progress is laid in factory work, a point which should be kept in mind in all production activity; (2) that it pays to keep up to date in every technical process; (3) that there is no need to "make do" with plant and equipment which does not measure up to your specific standards and requirements.

These are all policy points which any manufacturing concern could adopt. Too often none of them is considered. The factory works ahead without sympathy for sales viewpoint, and

vice versa; machines and production systems are allowed to become outdated, and the firm's competitive ability deteriorates until drastic reorganization is needed to avert disaster; frequently there is no encouragement given the firm's technical staff to invent new, or improve existing, machines. Adoption of policy points mentioned would, however, obviate these faults.

Another feature of the Aidas factory is the air of contentment about the staff. They work hard but happily.

There are, of course, many reasons for this. They get good rates of pay; they have a canteen; they are given a cup of tea at mid-morning and at mid-afternoon. These are all points that count, but there is one other which I think is important: the men are allowed to smoke. There is no danger, as in so many factories, arising from their so doing. But they do appreciate the gesture, and it is often upon such small points that goodwill depends.

Production Switchover is easy in Adjustable Buildings

ONE of the aims in design of modern factories is to produce a building inside which adjustments and revisions in layout of plant can be made easily and quickly. Primarily this calls for a clear area of floor space and natural or artificial lighting which is adequate in every part of the works.

From this point of view E. K. Cole, Ltd., have built an interesting factory for production of testing instruments and other scientific equipment. The building has several features which might be used with success by other manufacturers.

The shell is independent of all internal partitions. These, in turn, are fitted independent of the floor. Thus the whole interior can be completely redesigned in a few hours. Walls can be taken down, moved and put up again to meet changing needs. Indeed, this

"mobility" has been a key factor in the design of the building.

Flexibility has also been studied in the heating and lighting services. These have been laid out on the "grid" principle. Large ducts by the base of each wall, with cross ducts every 4 ft., are used. The ventilating type of Thermovents, convection heaters, which introduce fresh air from outdoors, are used throughout for heating purposes.

The pale-coloured walls, made of a fire-resisting material, have good light-reflection qualities and help to maintain an excellent standard of illumination. The arrangement of the artificial lighting has, of course, been carefully planned by a firm of specialists. Fittings are easily adjusted to meet changes in layout and so on.

As the result, every workbench in the factory is well lighted. Similar careful

attention has been paid to the natural lighting. The aim has been to provide ample daylight, yet to avoid discomfort from excessive heat rays. This has been done by use of a non-heat transmitting glass, of which the extensive windows are constructed.

The scientific nature of the work makes necessary strict control of temperature. This is accomplished by use of Thermovents with thermostat control. The standardized type of thermostat used cuts in at a temperature approximately 3 deg. to 6 deg. F. below that at which it cuts out. This provides regular but hardly perceptible variation—enough to give the healthy stimulus needed for correct functioning of the human body.

Incidentally, use of this convection-type heater eliminates cost of boiler plant, housing of pipes, fuel supply, storage and ash disposal. Space for switch gear, meters, etc., is all that is needed. The heaters take up little room in the building, as they are either recessed in the walls or included in the workbenches. There is no risk whatsoever of fire, as the element is enclosed.

Each workbench contains all necessary testing apparatus, etc., and at one end has a set of drawers in which notes, reports, plans and so on are kept. The section of the bench above the drawers is partitioned off as a desk so that each

Ample space for staff, planned benches, convection heating, use of non-heat transmitting glass in the extensive windows, etc., are some of the features of this 'adjustable' factory building. Note that each bench has an 'office' section (see text)



man has a special place at which to do his clerical work.

Benches are, of course, well spaced to allow easy movement. Every employee is provided with an adjustable "comfort"-type chair.

In the drawing office special "day-light" lamps are used and, naturally, all equipment for the draughtsmen is of the up-to-date type.

Although the factory has been specifically designed and built for instrument construction, many of its features could be used by other manufacturers. The

"mobile" internal partitions are an example; the convection heating system is another. And the non-heat transmitting windows would have advantages in most factories.

In addition, there is the whole plan behind the design: the building can be switched over from specialized to mass-production layout in a few hours. In such days as these, when needs and demands change rapidly, this adaptability is valuable, particularly to those manufacturers engaged in swift-moving light industries.

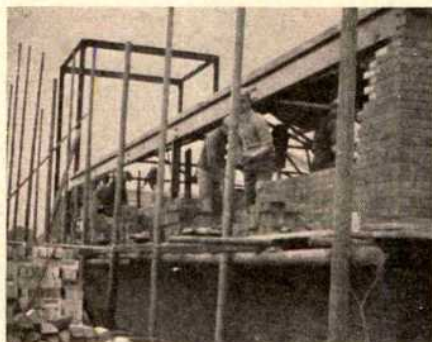
A. R. P. Problem in INDUSTRIAL LOCATION is Solved by these Sites

THERE is a new problem in factory location to-day—A.R.P. It is a factor which every board of directors must discuss in considering sites for extensions or transference of existing works.

Adequate A.R.P. schemes are, of course, being prepared at all industrial centres, but it is obvious that a new factory should be built as far from any likely scene of hostilities as possible. In Britain this must mean a move westwards. Such places as Plymouth, Bristol, Gloucester, Hereford, Kidderminster, Worcester, South Wales, North Wales, Cheshire, Manchester, Liverpool and other parts of Lancashire, Cumberland and the western parts of Scotland are certainly areas to be explored.

New Estates Planned for Light Industry

Although some of the places mentioned are not well-known centres of industry, others certainly are. In South Wales, for example, there is the Treforest Trading Estate, Cardiff, one of the Government-subsidized estates.



Here is a new area *planned* for industry. A manufacturer going westward as an A.R.P. measure would, in a case like this, find first-class facilities awaiting him. Similarly in Bristol and Gloucester industrialization is advanced; manufacturing facilities abound in the area.

Again, Lancashire needs no introduction. It is one of the most heavily industrialized stretches of Britain and can offer tip-top facilities to almost every kind of manufacturer. The attractions it has always offered business men have been recognized as almost ideal; this A.R.P. point is, therefore, merely another advantage in a long list.

Cheshire and North Wales, have, in recent years, developed rapidly as factory areas. Even Cumberland is now

"industrialized" to some extent and has an embryo Government subsidized industrial estate at Whitehaven. And in Scotland, too, there is a similar estate at North Hillington, Renfrew, now well developed, where a manufacturer can get first-class facilities and help in setting up a new factory. Other parts of the Scottish lowlands are, of course, old and well-established industrial areas.

If, after investigating all these centres, you find none that suits exactly your purpose there always remains Northern Ireland to be tried. Here, again, is an industrial belt with all the necessary facilities on hand. In addition, the Northern Government of Ireland give financial assistance to manufacturers locating there. The Ulster Development Council at Belfast can tell you all about the terms offered.

Financial Help is Given By Local Authorities

From this brief survey of areas which solve, through geographical position, industry's A.R.P. problem, you can see that choice of location is wide and need not impose any disadvantage on manufacturers. In nearly every instance, the estates, towns and centres concerned offer financial assistance and other facilities which are as attractive as any to be found elsewhere.



Choosing a site for your new factory

- 1 Collect particulars of all locations that may be suitable for your proposed new plant.
- 2 Examine the transport costs and facilities of the various localities and having decided which best satisfies your needs, inspect available sites.
- 3 Eliminate those sites which, because of their size, shape, or the nature of the ground, would be unsuitable.
- 4 Examine the remaining sites from the point of view of available labour supply, cost of local rates and taxes, cost of water, electricity and gas supplies. Reduce all possible sites to the one most suitable, and negotiate the purchase.

... but **Commercial Structures, builders of CS PLANNED FACTORIES, offer Manufacturers** a complete service that takes care of all site and building problems. After an analysis of individual requirements, a selection of suitable sites is offered where ample labour will be found, together with the necessary transport facilities. Plans are then prepared by qualified architects for a building designed exactly to suit the Manufacturer's purpose. If you are considering moving to new premises or extending your existing plant, you too may find CS ideas helpful. Building suggestions and estimates will gladly be submitted without obligation. Just write or 'phone . . .



Commercial Structures Ltd

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'Movable Floor Space' May Cut Costs of Your Internal Transport 60 per cent

MOVEMENT inside the factory and warehouse of stocks, materials, parts in process, waste products and so on is often not geared to match the tempo of all other work with the result, "bottlenecks" occur. This is usually the outcome of using antiquated methods of internal transport which allow goods or materials to pile up at various points and impede the flow of work. Many firms, for instance, still move big quantities of materials by hand methods. Others have introduced some kind of truck system but try to apply it to all jobs whereas it may be suitable only for a certain type of work.

The test of the soundness of your internal transport system is found in the answers to these questions: (1) Are jobs done as quickly as they could be by any other system? (2) Is the equipment always adequate to the demands made? (3) Are total costs low compared with those of any other method?

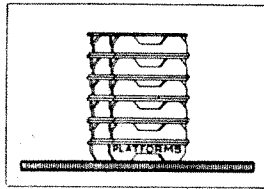
There are, of course, a great number of firms that have to face special problems of factory and warehouse transport. Where, for example, materials of unwieldy length or awkward sizes are used, hand methods of movement may be the most economical. But in most factories goods and materials are of weight and size that permits ease of trucking. The problem then becomes primarily one of speed, quantity, condition and cost of movement.

Platform System Cuts Costs, Saves Time

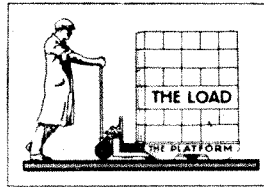
Of the several kinds of trucking and other internal transport systems available, the platform method, in which Collis trucks are used, is one which is widely known and adopted. It has a number of outstanding advantages: (a) an immediate saving of at least sixty per cent in floor transport costs per ton-hour; (b) a gain in processing times; (c) released floor space. Point (c) is generally overlooked, but experience proves its reality.

It is wise to consider the moving and distribution of materials as a major task and not merely as one where the cost of which is buried in "overheads." Every saving in handling and moving is important and permanent.

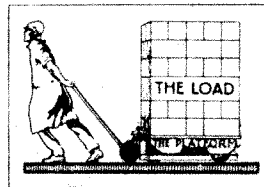
There are many trades that have



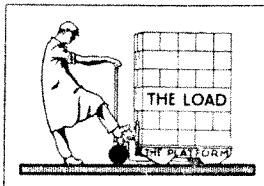
One



Three



Five



Seven

(1) Platforms are cheap, movable floor space. A stack of 15 is 6 ft. high.

(2) Loads may be anything in works or warehouse. On platforms they are off the floor, always ready to move, immune from damp, dirt and passing feet.

(3) A push centres truck under the load.

(4) The handle pulled down elevates the load. One man can do it in 3 seconds.

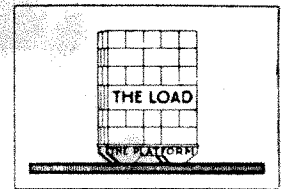
(5) Loads are on ball-bearings and can be pulled to destination by one man.

(6) Loads can be easily pushed and manoeuvred with the handle upright.

(7) On depressing the pedal, loads sink gently to the floor. Hydraulic release check prevents jar and shock. Operation takes 3 seconds.

(8) The released truck is immediately ready for another loaded platform. There is no rehandling to the floor of loads to free truck and man.

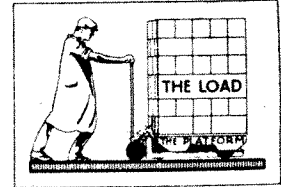
These eight illustrations show, in brief, the platform trucking system. Any number of platforms become heavy-duty trucks by means of one truck. For more internal transport you merely get more platforms. The system saves about 60 per cent in moving and distributing materials and goods and makes a big economy in floor space.



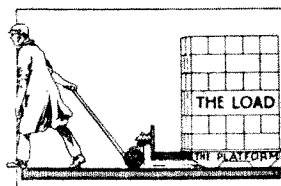
Two



Four



Six



Eight

profitably installed this truck and platform system to replace other methods. The nature, size and weight of loads are immaterial considerations and platform superstructures are readily devised when necessary. Class of labour, processing operations, floor levels and state, and manoeuvring space influence the suitability of equipment.

The Collis truck is made in 11 capacities: from 5 cwt., rising by 5 cwt. to 20 cwt.; rising by 10 cwt. to 80 cwt.; and 100 cwt. Each capacity is available in four standard sizes. The types are differentiated by the lifting mechanism and wheel lay-out, but each has a non-manual lowering device and ball-bearing wheels.

To co-ordinate with other handling appliances, to lift and carry loads of excessive dimensions, to incorporate an amount of lift exceeding the normal and to provide a sub-normal lowered weight, are some occasions when the dimensional specification of the selected type and capacity must be varied and a special model built.

Even that may not completely solve a handling problem. Often a permanently economical method is pro-

vided by functional design, at a relatively low cost. Open-end frames, differential steering, super high lift, flanged wheels and special superstructures are some features which may be incorporated.

'Special Construction' Solves Many Trucking Problems

For tractor haulage and inter-departmental transfer, a train can be made up of trucks each having a draw-bar and rear coupling. When separate loads are rarely less than 30 cwt., the all-hydraulic type is favoured with its unique multi-way lift and load frame rising vertically to an adjustable amount.

The "special construction" possibilities are often overlooked by executives yet here there may be a fruitful field in your concern for cutting time and labour costs and stepping up production. For instance, one firm had a very short type of wheeled lifting frame built. It was of special low construction and was used to lower in and withdraw from a drying stove loaded steel racks. Previously the job had

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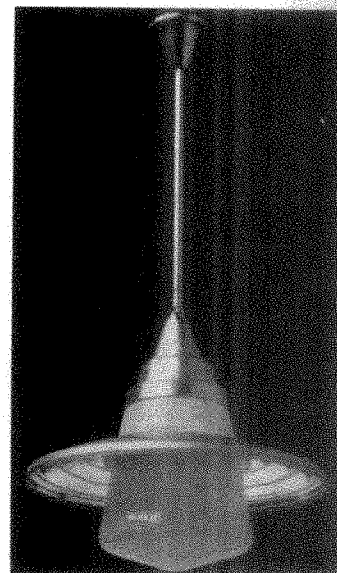
★ Write for the book "Temperature Control for all purposes."

THE MAGNETIC VALVE CO. LTD

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AN ILLUMINATING FACT

Industrial research has disclosed the fact that all workers, whether in an office or a factory, are affected to some degree by the quality of the illumination. Correct lighting plays an important part in promoting general efficiency in the office. The fitting illustrated is the result of our long experience of all forms of electric lighting and is ideal for office purposes. It comprises a "Harcoray" silvered glass reflector, the effect of which is softened by a satin rim, a one-piece opal globe, supported by a screwless safety gallery, and gives a high degree of "down-light" where it is most required.



"Reflecto H" Pendant
Ideal for Office Lighting

One of our lighting engineers is always available and his advice will not involve you in the slightest obligation.

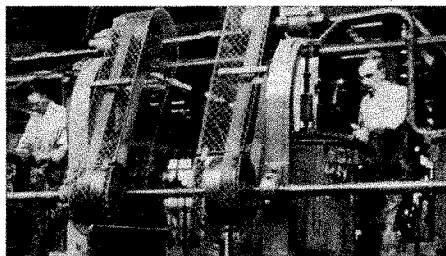
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Are you quite clear, as to the liabilities which may be incurred through IN-ADEQUATE Machine-guarding?



To-day it is essential to keep in mind that contributory negligence on the part of employees cannot, under the new Factory Act, be pleaded in the event of an accident.

This picture shows fully safe machine-guarding equipment by Procter Bros. According to the specifications of the Factory Act, this type of fencing makes actual contact with machinery physically impossible.

Procter Bros. can plan machinery-guarding to the specific needs of any industry without encroaching on potentially valuable floor-space.

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Statement of Accounts

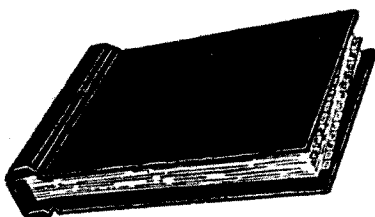
December 31, 1938

LIABILITIES		£
Capital paid up	...	15,158,621
Reserve Fund	...	12,410,609
Current, Deposit and other Accounts	...	464,249,757
Acceptances and Confirmed Credits	...	8,734,236
Engagements	...	8,483,612
ASSETS		
Coin, Notes and Balances with Bank of England	...	53,651,380
Balances with, and cheques on other Banks	...	17,813,029
Money at Call and Short Notice	...	25,089,239
Investments at or under market value	...	118,869,021
Bills Discounted:		
British Treasury Bills	27,035,202	
Other Bills	21,463,608	48,498,810
Advances and other Accounts	...	209,255,066
Liabilities of Customers for Acceptances, Confirmed Credits and Engagements	...	17,217,848
Bank Premises and other Properties	...	9,689,274
Shares in Yorkshire Penny Bank Ltd.	...	937,500
Investments in Affiliated Companies:		
Belfast Banking Co. Ltd.	...	1,795,836
The Clydesdale Bank Ltd.	...	3,195,114
North of Scotland Bank Ltd.	...	2,579,843
Midland Bank Executor and Trustee Co. Ltd.	...	444,875

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been done piece by piece, manually. Big savings were effected by use of the mechanical method. Again, one model has been built for transport of bins, tanks and other forms of containers. It was originally constructed to enable one man to lift, start and haul a gross load of 4,000 lb. This particular model conforms to many special conditions. If the work in your factory comes into this category the vehicle may be adapted to meet your requirements.

One-Man Lifting Banned By Act

Incidentally, to-day is a good time to go into the question of internal transport because of the new factory act which bans one-man lifting of heavy weights. It is necessary to see that you comply with the regulations. While you are checking up you can investigate the efficiency of your internal transport and find out whether you can cut time, labour and expense by adopting the platform system.

Temperature Control Can Save 40 Per Cent

(Continued from page 26)

for the booklet, *Temperature Control For All Purposes*. That gives a survey of the problem and shows in detail what the valves are and how they are used.

The valves are suitable for controlling steam, water, gas, oil, compressed air, and any other mediums which are usually passed through valves. They have, therefore, many industrial uses other than that of control of central heating systems.

Automatic or Distant Control Possible

Thermostats, wired up to the valves, make or break the circuit on rise or fall of temperature, according to whichever type of valve is used. The valves can also be operated by pressure, time or hand switches and other apparatus to give automatic or distant control.

Although the Magnetic Valve Co., Ltd., supplies chiefly to the trade—heating engineers, etc.—they offer a free investigation service to business men. Readers of BUSINESS are invited to take advantage of this service which covers the whole field of temperature control.

CORRECTION

THE combined effects of exceptionally bad weather and the Christmas rush partially dislocated normal services at the time our last issue (January) went to press. As a result, an error occurred in the advertisement of E. K. Cole, Ltd., Thermovent Heating Dept., on page 38 of that issue. The illustrations of the Thermovent "Portable" and "Inset" models became transposed. The model shown as the "Portable" is actually the "Inset," and vice versa. We apologize for this slip.

This Lighting System Can Cut Your Costs By 50 Per Cent

A RECENT development in lighting which cuts electric current consumption by 50 per cent is one of the things of importance to the business man.

The system combines the use of mercury vapour discharge lamps with ordinary tungsten lamps. The result is that units give about three times the amount of illumination provided by a comparable filament lamp fitting.

For some time now these discharge lamps have been used for street lighting and for some types of industrial work. The colour of the light, however, has been rather against use of the lamps in offices and other business premises. But lately low wattage (80 and 125) discharge lamps have been produced which, combined in use with two or

mercury lamp can only be decided by illumination engineers after an investigation. Savings effected, therefore, vary with each installation, but it is fairly safe to say that a direct cut in current consumption of at least 25 per cent is generally gained. In many instances the savings are bigger, fre-

quently in the neighbourhood of 50 per cent and sometimes nearer 75 per cent. The saving depends on the state of efficiency (or inefficiency!) of your old system which the new one replaces.

Another economy is found in the life of discharge lamps. Their effective life is several times that of the filament

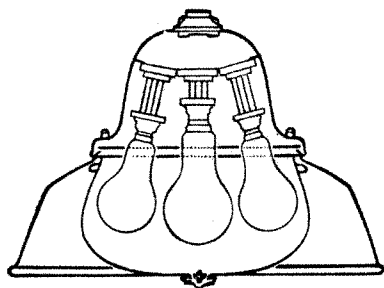
How to Control Salesmen's Car Costs

The methods used by one of the most progressive concerns in the country are given

on Page 12

three tungsten lamps, give a good colour suitable for ordinary office work. The red rays of the tungsten lamps balance the deficiency of red in the light from the mercury vapour lamps. The colour of the light which results is reasonably close to daylight.

Savings are effected through this system in several ways. The major economy is in current consumption. The total light output of one of the new units is equivalent to that of five 100-watt tungsten lamps, yet the consumption of current is only about 380 watts.

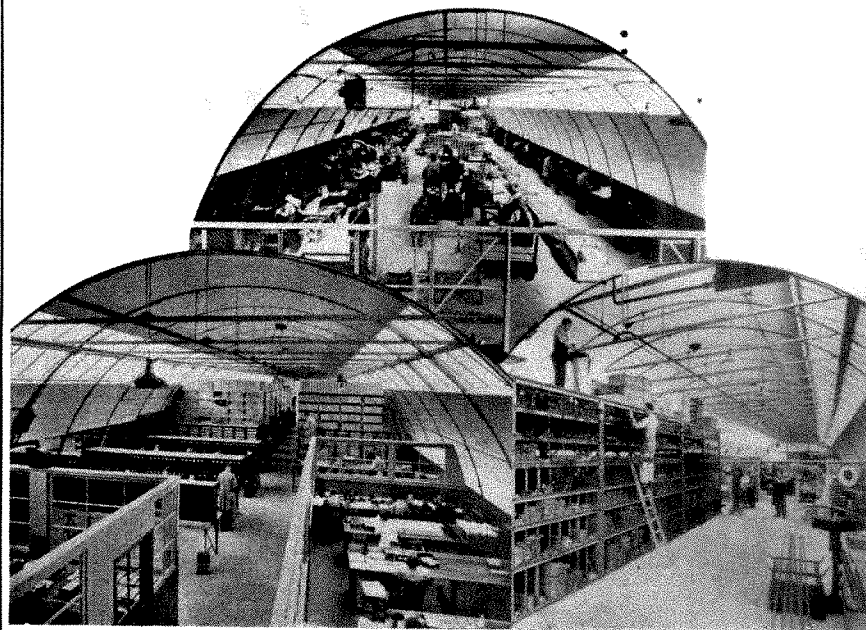


Arrangement of the discharge lamp with two tungsten lamps is shown here. The discharge lamp is placed in the centre and light correction is achieved by means of the red rays from the tungsten lamps (see text)

This calculation is based on use of two 150-watt ordinary filament lamps and one 80-watt discharge lamp. The direct saving in such cases is, therefore, 25 per cent in current consumption.

The proportions in which the two light sources are mixed vary according to the circumstances. Whether it is to be two or three filament lamps to one

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Where it is necessary to extend your plant, or erect a new warehouse or storage-depot, you will find that a gratifying cut can be made in the cost of building such premises by calling in Nissen's.

Nissen's engineers can plan and erect a steel works building to your particular needs in less than 2 weeks if necessary at half the cost of a usual factory. Nissen workshops and warehouses are good for 50 years at least **BUT AT ANY TIME CAN BE DISMANTLED AND RE-USED** to conform with a different layout or plant set-up.

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NEW INFORMATION ABOUT THE HOME MARKET IN THE NEW "MARKETING SURVEY"

This Survey is so up-to-date and all-embracing in its analyses as to provide every marketing fact and figure for every part of Great Britain that any National Advertiser, Manufacturer, or Distributor is ever likely to want. It will prove a mine of ideas to Directors, to Marketing, Advertising and Sales Executives, Advertising Agents, and all who are in any way concerned with distribution.

You can use this MARKETING SURVEY of the UNITED KINGDOM to expand and gain a firmer grip on your markets, find new sales outlets, and reduce your marketing and selling costs. For its ten Sections include, among many other important facts and figures: distribution of population, registered workers employed; private families; employment analyses; cars and commercial vehicles licensed; telephone subscribers; wireless licences; retail outlets for every country; new houses built in each of past 2 years, and every standard of living factor that can be resolved into figures.

● Every detail is easily and quickly found under these headings

- | | |
|--|---|
| 1. The National Market as a whole. | 6. Purchasing Power Index of all Markets. |
| 2. The Greater London Market, by 36 Chief Areas. | 7. All Marketing Services and Supplies. |
| 3. 563 Markets of over 10,000 Population. | 8. Marketing Trends, Population Movements, National Income. |
| 4. 102 Larger Provincial Markets. | 9. Survey of Major Industries. |
| 5. The County Markets. | 10. Index of National Manufacturers & Distributors. |

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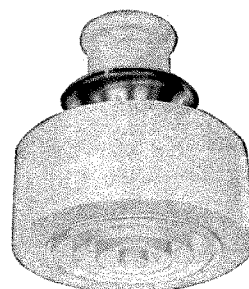
Numbers (see Index, page 5)

Firm

Address

lamp. Replacement costs, therefore, are negligible.

While it is true that the cost per unit of this mercury vapour-cum-tungsten filament system is considerably higher than that of the ordinary filament lamp installations, the *total* cost is little or nothing more. The extra expense of, say, three lamps to a unit, plus the cost of the choke which must be used with discharge lamps, is offset by the reduction in the number of units needed. For instance, where previously an office had, say, 25 units, under the new system it may be that only 10 are needed. But that is a matter to be decided by illumination engineers; no arbitrary proportions can be stated.



Various fittings to take the treble and quadruple lamp arrangement of the discharge-tungsten illumination system are now available. Here is one type of attractive modern fitting suitable for use in offices, shops and other business premises

Other advantages in the system are improved working conditions and less eye and nerve fatigue. These factors in turn influence output of work. Much has been published recently in BUSINESS on this factor.

A good deal of experimenting is still being carried out by engineers, and only a comparatively few drawing offices, shops, department stores, etc., have yet installed the system. Reports from these users, however, are very satisfactory, and a number of firms have already schemes in hand for using the system in their offices.

Another system which will shortly be available for offices is that using a lamp in which the mercury vapour and filament principles are combined. At the present moment illumination engineers are carrying out a series of office lighting experiments with these lamps. Results will be known shortly and the company concerned will then manufacture a range of these types of lamps especially for office use. Economies effected by the lamp will be around the 50 per cent mark.

Manufacturers who have developed these new systems offer a free investigation and advisory service to readers of BUSINESS. They employ a staff of illumination engineers to take up any business and industrial lighting problem. There is no obligation involved if you ask them to look at your lighting to find out what savings and improvements could be effected by use of the new system. We shall be pleased to send you the names and addresses of these concerns.

THE TREND OF TRADE

Business Situation is Not Bad — But It's Tricky: *This is How to Meet It*

THE turn of the year has brought a marked definiteness in the business situation. It may be stated broadly thus: "Business activity remains good; business enterprise is not good; business confidence is bad."

We have pointed out all along that a real upturn in trade has depended on three factors: (1) the state of business in Britain; (2) the emergence of a real upward swing in America; (3) the international political situation.

Up to this month the first two were favourable. British business activity has maintained itself amazingly well in the last six months and America seemed to be gathering herself for a strong upward swing. On the other hand, the international situation remained unfavourable.

Why Uncle Sam Has 'Jitters'

NOW, however, the U.S.A. position has moved from the favourable to the unfavourable column. The menacing international situation has shattered Wall Street's optimism and definitely chilled America's confidence; the upturn in evidence the last six months has been nipped in the bud and there is little prospect of any improvement in American trade during the next half-year.

We cannot, therefore, expect any stimulant to world trade and our own trade from that direction for the time being. And the international situation has had the same effect in this country of a damping of confidence. These are two important factors in considering the trend of business over the next six months.

At the same time actual business activity in this country remains on a good level. The Stock Exchange is usually wrong when it comes to making a judgment of political events. It always overstates the psychological aspects of a situation. And it is unfortunate and illogical that the City's minute-to-minute opinion should so strongly affect the business leadership in every country.

1938 Start Was Good: Facts Similar To-day

FOR however pessimistic the City may be, the decline in confidence is not so marked in the Provinces, and business activity on the average is still on a high level. Nobody considered the beginning of 1936 a difficult time. In fact we all considered business "good" then; yet the level of business

1. Put every Sales Effort behind Your Proved Good Selling Lines — Avoid Speculative Products . . .
2. Make Constant War on all Unproductive Costs in Every Part of your Organization

By CECIL CHISHOLM, M.A.

to-day is almost identical with that period and a little below the very high level of a year ago.

There are many favourable factors at the moment mixed with some unfavourable ones. Employment is actually higher by 5,000 than it was a month ago and by 10,000 than it was a year ago. It is true that the unemployment figures are larger due to the new workers coming into the market, *but the volume of employment is actually higher than it was a year ago.*

Wages are $1\frac{1}{2}$ per cent higher than at a year ago. Money is still cheap. The price level is stable. Cost of living has remained stationary for several months and is still below a year ago. No signs appear of over-expansion of production. There are no apparent "bad spots" financially. Retail trade is maintaining itself. In November retail sales were, for the first time, down by 3 per cent on the same month of the preceding year. December sales were up on the preceding year by almost 2 per cent. Motor-car sales have turned their autumn trend and taken a jump upward.

Here Are Some of The Unfavourable Factors

ELSEWHERE there are unfavourable factors. December showed a large fall in iron and steel outputs compared with a year ago. House-building plans are down by 43 per cent. Cotton and other raw material imports on which textile industries work have shown a radical decline, indicating smaller finished goods orders. Ship-building, outside naval orders, is stagnating. Exports have been, and still are, down compared with a year ago.

But the favourable facts and figures certainly indicate that we are maintaining our internal business activity. Factories are working on a high level. Purchasing power is maintained. The consumer may be buying less at the

high levels and orders for exports and raw materials declining, but the wage-earning mass consumers are maintaining a high buying level. And with the amount of overtime being worked in rearmaments, motor, and certain consumer industries, we believe this level of purchasing power will continue. It will more than offset the short-time working in the textile industries.

Strong Sales Appeal Still Gets Business

CERTAIN provincial areas are making up for falling retail sales in the South. The working classes and business people are spending more freely than the farmer and the landed gentry and the upper classes. Even so, certain industries selling to these classes, if their appeal is strong enough, are maintaining their sales. Motor sales, for instance, have shown a strong spurt in the last two months after the decline during last year.

One must remember that the predominant thought of the public at the moment is the "risk of war." The general public, as Lord Northcliffe used to insist, can think intensively of only one thing at a time. Is it possible to switch the sales argument for your goods into this channel? Can you tie up in any way with economy, utility, and practical use in "crisis" time?

Now what should be the attitude and the policy of the British business man over the next half-year in view of the situation as we have pictured it? It seems to us that he should follow two major policies.

Adjust Policies To To-day's Conditions

HIS first and ever-present purpose should be to push for sales. And here every business must adjust itself to the changing situation. Buoyant

buying power to-day is not in the higher consumer classes, but in the masses. Let the business man endeavour to adjust his marketing policy to that end. Whether you are manufacturing goods for the consumer or producing goods and equipment, whether you are rendering a service, etc., you can adjust your marketing efforts to this situation. Many businesses are even going so far as to adapt their goods or their selling appeal to the present A.R.P. situation and the public's preoccupation with international politics.

Finally, as the car-makers have shown us, the public will still spend big money on what it really wants. Are we selling our product as enthusiastically as the motor people sell theirs? This is a time when nervous energy must be pumped into the sales organization from the top till it percolates to the youngest junior who takes an occasional order.

Lower-Price Bait Always Get Bites

THE second policy for business to pursue to-day is to cut costs. The period of high-level prices and raw material costs is over. Retail prices should be coming down as these lower commodity costs manifest themselves. All consumers to-day are watching their purchases and have a constant eye on economy. Lower prices always invite buyers if the buyers have the money to spend. Not only will lower-priced lines go better because the lower-class consumers have the greater purchasing power to-day, but the better-class buyer also will be appealed to by the price consideration.

Political Intrusion Has Increased Costs

A GAIN, to maintain and expand our export trade, reduction of costs is not merely important, but vitally essential. The entire trend of politics and our trade policy for the last seven years has been to contribute steadily to increases in costs. There has not been a single political intrusion into business but what has tended to increase our costs. The cost of coal and of power, of sea carriage and internal transport, of raw materials produced within our own shores; the level of wages, the hours worked, the unit rate per hour; all these have invariably contributed to raising costs.

For instance, the reason the British shipbuilding record in the last 10 years shows a drop from 54½ per cent of world tonnage launched to 34 per cent, from 55 per cent of the world's shipbuilding to 20 per cent, from 33½ per cent to 29 per cent in world tonnage, is due to higher costs of shipbuilding and to higher costs of running ships. We have ceased to be the world's shipbuilders and carriers. Not only American tankers but British liners are now being built abroad, in Holland and Sweden particularly.

Reading the Indices

For these new indices the average business activity in each area during 1933 is taken as the base (=100). The indices are given by months.

The shipbuilder's claim is that his high costs are due to the higher prices of steel, machinery, timber and coal. Quite true. But we shall not regain our shipbuilding position unless all these costs are again brought down. When an industry does bring down its costs, as, for instance, the motor industry, then it maintains its markets and its sales, and that is the lesson for every business man.

Our Activity Is Factor Helping World Recovery

NOW if we British business men can maintain our internal business activity and our present level of prosperity by our own pushful efforts, there is always a chance that the other factors will eventually come in to help towards a real upturn in our favour. For while

BUSINESS REGIONAL ACTIVITY INDICES



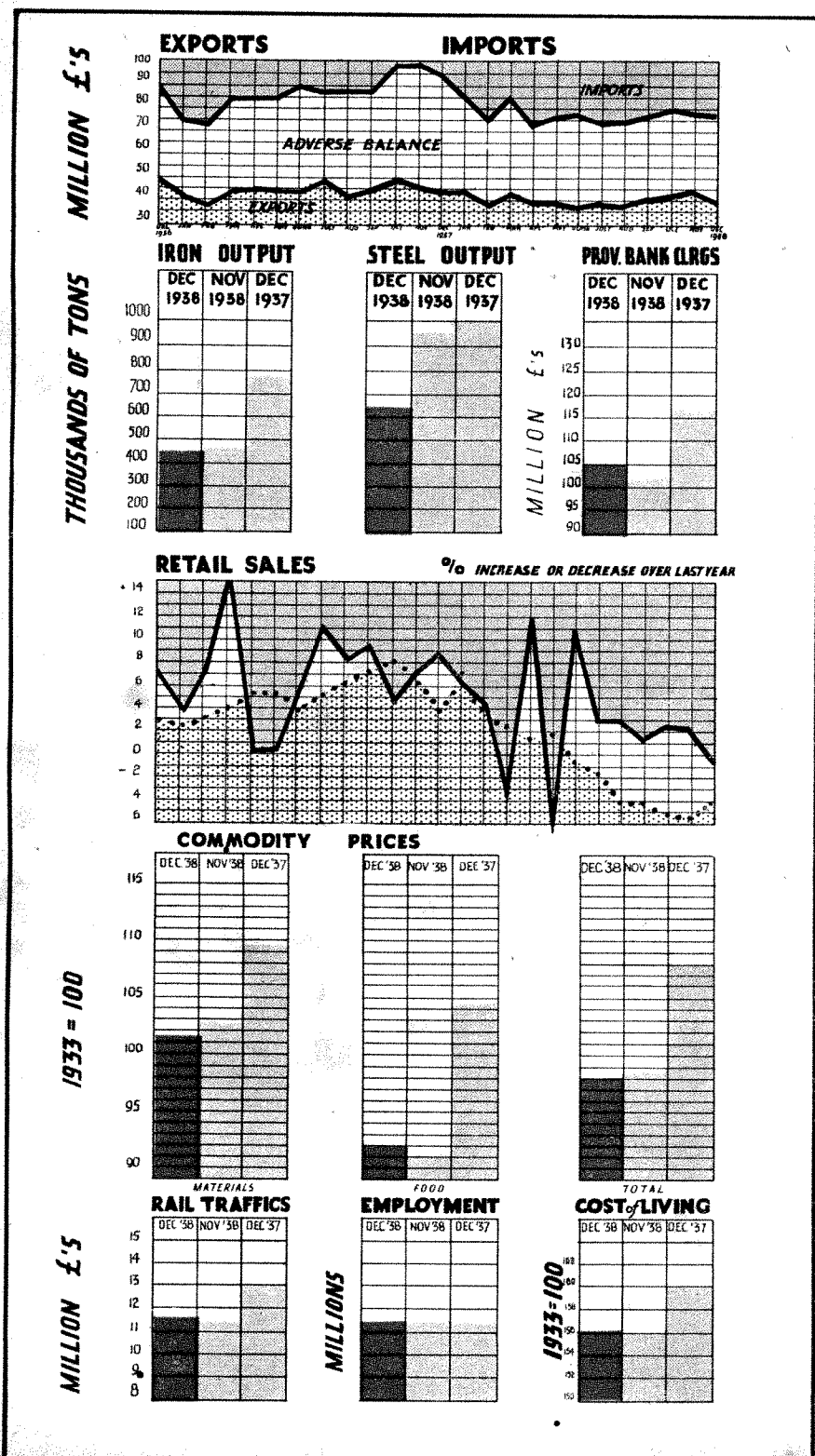
during this month almost every branch of American industry has seriously slowed up, yet the cause is almost entirely nerves, lack of confidence principally in the international situation and somewhat in their own political situation. The cause is not a fundamental deterioration in their own business basis.

U.S. Confidence Leads to Upturn

FUNDAMENTALLY, the American revival was slow and steady. Building plans passed have doubled over the "low" in 1938; car output is up to 100,000 a week, a very good average;

GUIDING FACTORS IN THE TREND—

All comparisons are with similar month in last and previous month in this year



steel output also is good. Actually industrial output is slightly over its average for 1923-5, a remarkable achievement from the "low" of six months ago. Better still, department store sales are only 2 points below November of 1937, practically a boom month.

Clearly, only a lack of confidence can slow up the American revival. It is true this revival has been called "lopsided" in so far as it does not include agriculture, the cotton and textile industries, but we can scarcely believe that it would not "fan out," given stable conditions in Europe and at home.

Finally, there is more money waiting investment than in any time in the history of the United States. The slightest encouragement would see another Wall Street boom.

On the other hand, if America is to recover this summer, confidence must be restored quickly, for the American business season ends in June. Unless things improve during the next six weeks, the hopes of a consumer revival will be lost. The totalitarian states, in fact, have American prosperity at their mercy.

Germans Find Empire An Expensive Luxury

THE position of Germany is crucial, not merely politically to others, but financially to herself. The leaders of the Reich are now learning that to take over new territory is not all jam, that empire building is apt to come expensive. As a result of taking over Austria in March and the Sudetenland in October, Germany's credit trade balance of £18,000,000 in 1937 has been turned into a deficit of £20,000,000. Her foreign exchange reserves being also exhausted, the Reich must increase her exports to cover not only her raw material imports, but interest on her foreign debt.

Both The Dictators Want These Markets

CLEARLY the exploitation of the Danubian and S.E. European markets must be pressed forward with the utmost speed. The Führer and Duce are already struggling with one another desperately for Yugo-Slavian business. Germany is also making a bid for a larger share of Rumanian trade. All this means possible lowering of our exports to S.E. Europe, but every effort is being made to maintain our position in the Near East, in Persia, Iraq and Palestine. These possibly are the next targets of the German merchant venturers.

Salesmen Should Follow Farmer's Example To-day

THE best word I have seen on the situation comes from a business man:

"1939 will reward salesmen who sell as the farmer ploughs—daily, doggedly, plodding and plugging along, not wondering about the 'up-turn,' but turning up the furrows."

Here's to good ploughing!

How Advertising 'Ground Bait' Got National Sales through two seasons' campaign

from

ELLISON'S of CHELSEA

SOMETIMES it is said that salesmen are the easiest people in the world to be "sold" anything. If this is true, then anglers should believe the wildest of improbable stories.

Such a line of reasoning is interesting and might explain why Ellison's, of Chelsea, manufacturers of fishing products got quick sales for their new "Killer" bait. But it does not explain why they have built up a national market in two seasons. That is the outcome of the bait doing all that is claimed for it.

If you are an angler you know the usual hopeful routine of tossing ground bait into the water around the spot where you intend to fish. The theory is that this food attracts fish which will, sooner or later, take the bait on the hook. Usually, however, the ground bait used succeeds in giving the intended victims a hearty meal.

Product Had This Vital Sales Point

Now this is the problem which "Killer" bait solves. It does not feed fish but attracts minute underwater insects which, to fish, are as a Martini is to you. Then, having enjoyed their cocktails, the fish become hungry, keen for the joint and two veg. on the angler's hook.

There are times, of course, when fish will not, and nothing will induce them to, bite. Except for these occasions, "Killer" bait works like a charm—according to tests carried out for the firm. Indeed, it was an enthusiast who wrote: "Your new bait is . . . a killer for all fish." So the product was given the name "Killer."

In June 1937 the first small advertisement appeared in the *Angler's News*. The cost was under £2, and sales exceeded £5. From this modest start the business was built up. Small spaces costing a matter of shillings were taken in trade papers. Later in the season the firm started to spend several pounds at a time, with correspondingly increased volume of sales. The aim, of course, was not only direct selling to users but to open up dealer accounts. By the end of the season over 20 dealers were on the books.

Progress had been slow but revealed a market worth developing. The company, therefore, called in All-Counties Publicity, Ltd., to investigate the possibilities. The probe showed that, while the bait was suitable for keen fishermen willing to prepare it, ready-for-use bait was needed. In addition, it was found

that other products were wanted to make a solid attack on the market.

The outcome of this report was production of "Pelloids," a prepared bait; "Boyent," a fishing-line grease and preserver; "Hookloor," and "Sta-put" paste, baits which did not, unlike some baits, fall off the hook every time the angler struck. Later the "Sta-put" paste was produced in three colours (white, cheese and salmon roe) for use under different conditions.

Attention was next paid to the packs, which were brought up to date. The ground baits, for example, were packed in handy bags; the pastes were put into waxed tubs of pocket size and with screw tops. The tubs had an after-use value as containers for hooks, swivels, shot, leads, and other small equipment of anglers.

Products were now lined up and ready for the new fishing season. There was a range of them that made orders more worth-while and profitable. In addition, the success of the "Killer" bait had automatically opened up a favourable market for other Ellison products.

The backbone of the publicity scheme for the 1938-39 season was the production of a four-page paper, *Anglers' Record*, used as an insert in *Angler's News* and *Fishing Gazette*.

How Propaganda Paper Got Reader Interest

This "house" paper contains short articles of interest to anglers. Interspersed are advertisements and editorial description for Ellison products. The paper makes attractive reading and has brought a big response from fishermen.

Since June of this year about 75,000 copies of the *Anglers' Record* have been distributed, either through the Press or over retailers' counters. All dealers have been sent copies, together with a window strip: "Ask for Free Copy of the *Anglers' Record*."

Immediately after the campaign was launched results were good. Within a month the products were selling at these rates: "Killer," 1,450 bags (6d. each) a week; "Sta-put" pastes, 3,340 tubs (6d. each) a week. Up to November the total sale of products had mounted to over 30,000 units. Not such bad going on a campaign where advertising costs—which have been the

biggest selling costs—have been kept down to such a low level. The cost of inserts, for example, is below £10 a time. The cost of printing the *Anglers' Record* is, of course, over and above that sum.

The volume of business leaves no doubt as to the effectiveness of the advertising. General trade discounts, naturally, have attracted dealers' interests, and over 300 accounts have been opened without one call from a representative. In addition, wholesalers and chain stores have taken up the products. The total coverage is now 800 shops, which gives good national distribution.

There is every indication that, from the small "one-man" start of two seasons ago, Ellison's will shortly build up a big business. To date the works has been enlarged to three times its original size, and plans are made for a move to a new factory. The products are "going over big." They are getting support from the right people. For instance, "Tommy Ruffe," West of England angling writer and competition fisherman, is praising them, and, recently, George Bright, of Bristol, won the All-England championship while using "Killer" bait.

That is an important triumph and will undoubtedly help Ellison's to push up sales of all their products.

Square Deal for Traders, too

IN seeking their Square Deal, the railways have given their assurance that it is not their intention to enter on cut-throat competition with other forms of transport.

Through the Traders' Co-ordinating Committee,* business firms have stated the urgent need for these other forms of organized transport to give a similar assurance. The Committee has, in fact, hinted at the desirability of legislation to secure this.

Business does not want a price-cutting war between the transport interests. On the other hand, neither does it want any fresh combination of the various forms of transport designed to keep rates high.

The Committee has said that, before agreeing to the Square Deal which the railways want, one of the chief assurances the business man demands is the unrestricted right to use whatever form of transport, including his own, may suit his purpose best.

*The Traders' Co-ordinating Committee is a body formed to deal collectively with the freight traffic problems of its members, which consist of more than 50 Trade Associations, including such bodies as the Association of British Chambers of Commerce, the British Iron and Steel Federation, the Federation of British Industries, the Mansion House Association, the Mining Association, the National Farmers' Union, etc.

Marketing TRENDS

**Sell First, Buy After,
Policy Swells Profits**

CONSIDER the marketing policies and practices of big stores. Why are these businesses so successful? Because their policies are far-sighted, plans carefully prepared and put into practice, down to the last detail. When these firms feature new lines they do not "think" or "believe" the goods will sell: they *know*. If they do not know they find out. They conduct extensive tests.

Such big retailers do not buy first and (maybe) sell later; they sell first and buy afterwards. That, in effect, is what they do. Their policies and methods cut out marketing mistakes.

**Even The Sewing Circle
Is In Marketing Plans**

MANUFACTURERS can learn a lot about selling from the big retail groups. Take the instance of Marks & Spencers, which firm recently opened a new big store in Oxford Street, London, W.1. Their successful policies and methods should be helpful to manufacturers. And they are.

The firm has a staff of fashion stylists, not merely to find out and anticipate styles, etc., but to work with manu-

By the
MARKETING EDITOR

facturers who supply fabrics. Chief stylist helps manufacturers to perfect designs; she creates patterns, styles, etc. She contacts manufacturers on every point, from initial stages to finished product. Minute instructions as to material, trimming and *even the number of stitches to the inch of machining* come from her.

**'Grouse' Girls Get The
Sales Slant On Slating**

WHY does the chief stylist take such deep interest as this? Because the firm leaves *nothing to chance* in turning out goods that will sell. But the job does not finish there.

Directly a new line is "on sale" specially trained "contact girls" go from shop to shop, serving behind the counters. Their job is to find out, from staff and customers, if there are any faults in the merchandise that can still be remedied.

From this sort of research the firm discovered that "biggish" women were being neglected. Now they make a

strong selling point of young fashions in large fittings. They have given the big women a chance to be smart at low cost.

**If Everyone Has A Say,
All Have A Good 'Line'**

WHERE manufacturers work with big stores, help on marketing problems is theirs for the asking—or even without. But what about manufacturers who do not deal with such retailers? They, too, need marketing pointers.

To some extent they get them. Every manufacturer gets a "stop" or "go" signal from sales volume and repeat order business. Retailers and reps. provide suggestions, hints and advice. But all this is not enough. A *plan* is needed. Careful, systematic research among retailers—who, after all, do the selling to consumers—would save many manufacturers sleepless nights and bank overdrafts.

Try out the scheme next time you have a new line to market. Get retailer criticisms. Let the retailer's salesmen give their views. Get some consumer criticism, too. And do not forget the poor old reps. who have got to push the goods on to shop shelves. They can usually be helpful.

Successful stores and manufacturers link up this way. That is why they make big profits. But they have not got a monopoly on the principle. You can use it, too, with success.

1939 ?

1938

Despite the generally admitted difficult trading conditions of the last two years, we succeeded in increasing our turnover in 1937 by no less than 25%. During 1938, though the international situation threatened to dislocate business, our 1937 turnover was exceeded in the first nine months. This increase has been obtained by the only forms of salesmanship that carry weight with business people . . . service and quality that are high, consistently maintained and constantly improved, and a keen spirit of progress which finds new ways of doing things better and stops at nothing to help you out of a difficulty. We are confident that during 1939 this policy will meet with even greater success.

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Is your sales literature singled out from the mail for attention first?

Does it leave an impression powerful enough to make yours the first name that springs to mind the next time your product or service is required?

We have a close intimacy with the factors that make sales literature memorable.

Our layout suggestion for your next piece of printed advertising would show you how strikingly your products can be presented. May we prove that?

J. W. RUDDOCK & SONS

Printers and Advertising Consultants
LINCOLN

and at 3 Old Jewry, LONDON, E.C.2

Beat an 'Impossibly High' Sales Quota and won a Lion Cub



Extreme left, Mr. W. S. Finlayson
Mrs. Thomson handling 'Rota
Quota'; Mr. George Thomson
extreme right

SALES executives who are always trying to think up new incentives for their staff to increase business might get an idea from Kaye's Rotaprint Agency, Ltd., whose general sales manager, Mr. G. Thomson, recently won a live lion cub for beating a sales quota.

The animal was won as the result of a bet between Mr. Thomson and Mr. W. Finlayson, Northern manager of the Rotaprint Company. During the recent Business Efficiency Exhibition at the City Hall, Manchester, Mr. Thomson stated that he was sure he could get a certain quota of sales—an "impossibly" high quota, and under adverse conditions—before the exhibition closed. His colleague thought otherwise.

Previous to this talk Mr. Thomson had been admiring a lion cub he had seen on the stage at the Manchester Hippodrome. Half-jokingly, Mr. Finlayson, thinking himself perfectly safe, offered to buy the cub providing Mr. Thomson beat the quota.

"I did not think Mr. Thomson would take me at my word," Mr. Finlayson told BUSINESS, "but he did, and got

the sales within three hours of the time the exhibition closed its doors."

Most people, no doubt, would be somewhat embarrassed if given a lion, but not Mr. Thomson. He is something of an amateur zoologist and the cub is a useful addition to his "zoo." He is keeping Rota-Quota (the cub's self-explanatory name) until it grows too big for a pet.

The story of Rota-Quota has been published in many newspapers, trade papers, and periodicals, which is excellent publicity for Kaye's Rotaprint Agency, Ltd. It is, indeed, a good example of what can be achieved when news is added to a firm's activities.

CLASSIFIED ADVERTISEMENTS

(Continued from page iii of cover)

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Time Recorders and Electric Clocks. We have new machines of all systems in stock; rebuilds at half price, fully guaranteed. Supplies, repairs.—Time Recorder Supply & Maintenance Co., 159 Grange Road, London, S.E.1.

Staff Time Checking and Job Costing Time Recorders (all makes) for quick cash sale, exceptional condition.—Write "Betacrol", Box 345, BUSINESS, Whitefriars House, Tallis Street, E.C.4.

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A well edited interesting house magazine, profusely illustrated, is available at very low cost for one trader's sole advertising use in each district. Write on business letterhead for specimen and quotations. Arthur May, House Magazine Specialist, Nazeing, Waltham Cross.

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with his two
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LEWIS C. COHEN
Managing Director.

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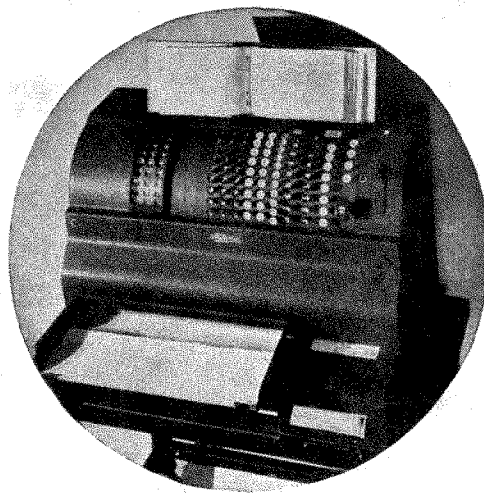
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other picture: National high-speed Posting and Billing Machine — prints many original records, requires no carbon papers — has no moving carriage. Provides as many as thirty totals. Is in fact, the fastest machine of its type in the world.

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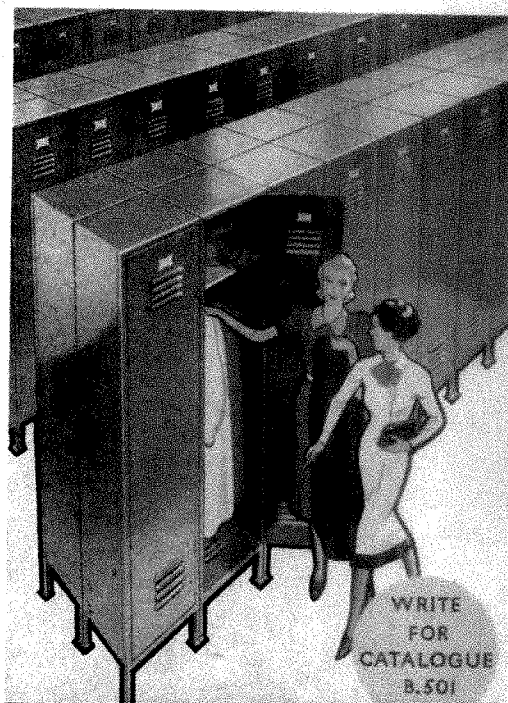
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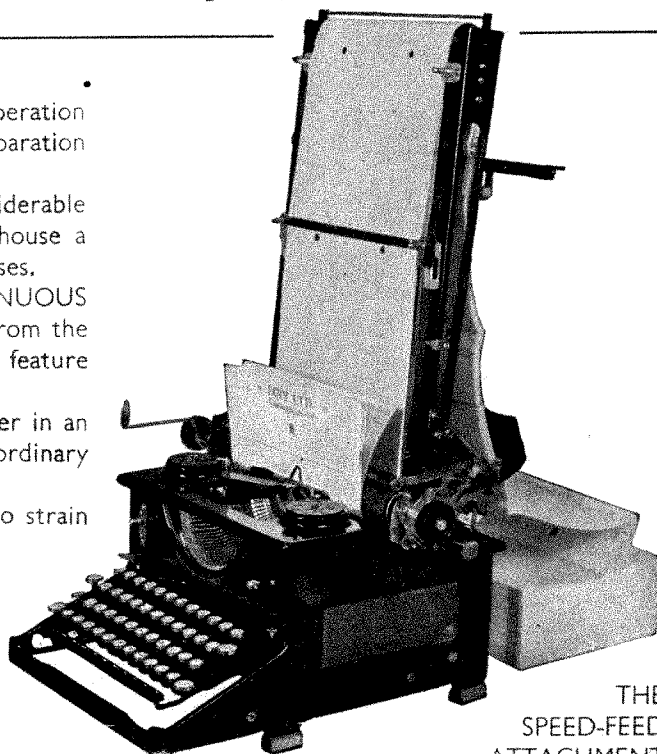
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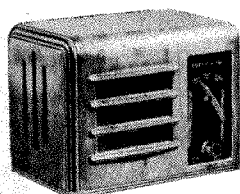
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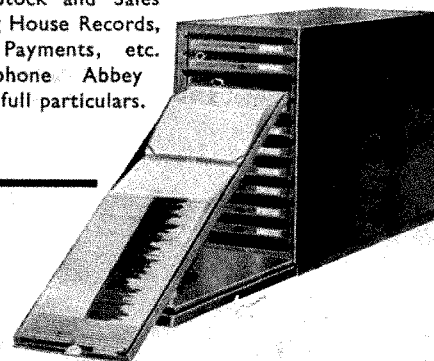
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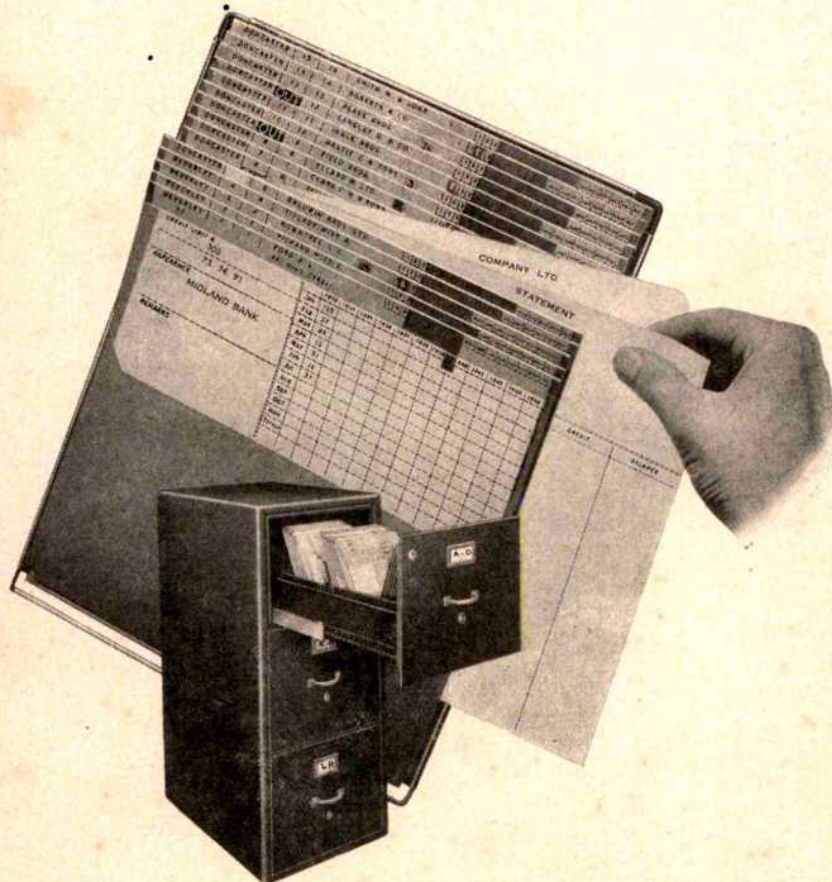
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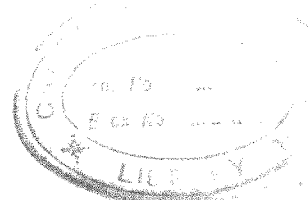
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Profits Expanded . . .

Despite Set-back in Turnover

FOR many industries last year was not a period of general expansion. Markets were nervous; political unrest, culminating in the September crisis, caused a wholesale tightening of trade and consumer purse-strings: such a tightening-up, in fact, that to firms in many industries it amounted almost to a slump.

The experience up and down the country was "restricted turnover," and the major problem of management became: *How to keep profits from similarly sinking.*

In this some firms were successful—in varying degrees. Others, however, were not so lucky, or rather they were not able to plan and achieve this desirable result.

The present year, on the whole, indicates better prospects. Nevertheless, no business man will delude himself into thinking that there is nothing more to worry about or that a trouble-free run of comfortable prosperity lies directly ahead.

While, during 1939, no devastating crisis is now really anticipated, and though business confidence shows many signs of returning, management will still have to plan very astutely for profit growths.

With this condition existing, therefore, it will be useful to look at the administration of a firm that *did* raise its profits during 1938, despite an inevitable shrinkage in turnover. Such a survey should prove valuable because the policies that were successful then are the policies that will be successful now and in the immediate future.

Everyone knows that during last year the motor trade was one of the hardest hit by the depression.

Stewart & Ardern, Ltd., distributors of outstandingly popular cars and trucks to private and trade users, naturally did not escape this partial freeze-out. How, then, did they still manage to show increased profits?

The answer is: solely by good administration and management.

The profits of a business—any business—are governed by the total cost

Here, in outline, is a Management Plan that beat the recession influence of 1938. Trading conditions for 1939 seem brighter, but the need is still great for the kind of Flexible Cost-Control policy described here.

by F. T. POULTON from an interview

GEORGE H. UPJOHN

Joint Managing Director, Stewart & Ardern Ltd.

of trading, balanced against actual sales made. That is fundamental. The average man might dismiss it as not worth mentioning here. But this is a fact: Most business failures are due to lack of a quick, elastic control of total costs that enable them every day (every hour almost) to be held down to their proper balance against total sales.

I would say of George Upjohn that he is first a figure-man, and secondly a genius at cost control.

Before going any further, it can be said that this quality in the head of the firm is the basic reason for increased profits conjured out of reduced turnover.

Good Management Key To Bigger Profits

Business men who know the motor trade might retort these profits were buoyed up by the fact that car-selling prices were raised during 1938.

True, prices were raised. But the increases were very slight and did not nearly offset the drop in all-over sales volume of cars and trucks.

No; it was not any fortuitous circumstances of that kind but thoroughly good management that gave S. & A. a successful year.

Let us look a little more closely at this factor of management; let us look at some of the basic methods.

In the first place Mr. Upjohn explains that the entire staff and routine system of the organization is flexible—that it can be expanded or contracted, within 24 hours, to meet any changing state in the volume of business.

If that sounds commonplace I suggest it is a commonplace that is more usually talked about as an ideal. In very few organizations is it in operation as a fact. But I have seen it at work; it is the factor which enables that vital, instantaneous adjustment of overhead costs to be achieved.

It must not be imagined, of course, that staff and equipment is hired and fired or otherwise manœuvred in great lumps. The ups and downs of a business are never so marked as to call for that sort of movement. In fact, except at times of acute crisis, such as referred to just now, the trend of a business is not generally towards contraction but towards a more or less steady expansion. Nevertheless, a policy of adaptability is no use unless it will operate easily in every direction.

Mr. Upjohn's plan of staff management revolves around what he calls his pivotal men. These are the key executives, representing every essential branch of the business.

Under their control come the semi-executive people in each department, and thereafter the rank and file of staff under their supervision. That, of

course, is normal practice. But a unique fact is that in this lower strata there are really two staffs, the permanent and the temporary staff. Each is listed in a separate register.

The permanent staff, numbering somewhere about 900 people, naturally constitute the basis of the business. The temporary staff, on the other hand, much smaller numerically, forms a "float" which enables that quick adjustment to be made to the changing volume of business.

"Floating" Staff Valuable Cost Control Factor

Quite apart from the needs of rare occurrences, such as the 1938 crisis, the motor trade in the normal course of business is subject to sharp seasonal rises and falls. It will be understood, therefore, that a "floating" staff that can be expanded or contracted to meet the exact needs of the moment is a very valuable factor in cost control.

The permanent staff is also so organized that it is equally flexible. But, being more intimately linked into the structure of the business, it is guarded to a great extent by the "cushioning" effect of the elastic temporary staff. Only when demands for adjustment are great and persistent does the movement penetrate right through the "cushion" layer of temporary staff and affect, to any great extent, the staff in general.

But the factor of complete flexibility does exist. As Mr. Upjohn put it: "If our sales were suddenly cut down by half, or equally quickly expanded to double their present level, we could, within 24 hours, reduce or increase our staff and routine—as a balanced unit—to fit either situation exactly."

Very few big-scale organizations could do that. Yet it is this *instant* adaptability to conditions that is so vital to real cost control. It is the enormous time-lag between the incidence of a condition and the economic moves in the organization to meet it that is the weak spot in so many business concerns.

The quick expansion and contraction of temporary staff can easily be understood. But how do S. & A. keep the permanent staff so flexible without serious upset when movements are made?

The secret is that all jobs are properly and systematically understudied. I was told that there are no water-tight jobs either in the office or the shops. Everybody, whatever his specialized work, is given as wide an experience as possible understudying allied jobs. This makes personnel interchangeable, flexible, and also prevents the danger of hold-ups should anyone on specialized work be absent through illness or any other cause.

A flexible staff is of no use, however, unless you have the information on which to adjust it. And this is where George Upjohn's genius for cost control comes in. He knows *what* cost figures to have, *when* to have them, and *how to use them* when he has got them.

The Stewart & Arden London organization consists of the administration

offices and large service depot at Acton, nine depots and coach-building works in other parts of London, and main showrooms in the West End.

Costs have to come in from all those different points.

It is unnecessary here to say exactly what costs Mr. Upjohn uses for control purposes. They are costs peculiar to his own business. But it is important to explain that every item of outgoing money is clearly revealed in its appropriate cost sheet *every day*.

Naturally, all revenue accounts and items on the credit side come in, too; that is understood. But it is the cost side we are considering at the moment.

At stated times during the day cost reports come in. As I say, they show everything.

For example on "repair" jobs, which include work done on cars and materials employed, each job should show a pre-fixed percentage of profit. The analysed costs that come up for scrutiny each day show exactly what ratio

of profit each job actually made. Any variation below standard is investigated, not with a view to censure but with the idea of discovering difficulties that can in future be avoided.

All returns are scrutinized every day, and nothing is missed that has any bearing whatever on the expenses of the business.

On appropriate returns there come to him every day not only details of the major costs of the business but also such things as the number of invoices not sent though due out that day; the length of time each customer was kept waiting before he was attended to, etc. All detail items such as this have their bearing on costs, and in the aggregate their effect on costs is of course enormous.

Mr. Upjohn's main concern is really with 39 sectionalized profit and loss accounts which come to him each week. In these he has every point of the business clearly epitomized, and compar-

(Continued on page 15)

Is YOUR Business Suffering From "Jitter-Stistics"?

THE great growth of statistical knowledge about industry and trade, the enhanced availability of current information as to what is going on in the world, and the development of business forecasting and other forms of economic and political soothsaying have been coincident with a decline in the vigour of business enterprise.

Business Soothsayers Make Trade Fluctuations Worse

Far from alleviating the excesses of the business cycle, the activities of forecasters and pedlars of economic prophecies are probably making them worse.

This is not to deprecate the very real advantages which have been conferred by these sources of business knowledge. But while forecasters have flourished, the spirit of enterprise has languished; and the spreading of knowledge has made the seesaw of business boom and depression more violent. Why is this?

Business fluctuations flow from the decisions of individual business men. When these decisions are predominantly on the affirmative side, tending toward expansion, we have a boom; when they are on the negative side, we have a slump. The nearer the approach to unanimity in the sentiments which motivate these decisions, the more violent the movement.

The availability of all kinds of statistical information and the speed of present-day communication make for *hypersensitiveness* throughout the business community, cause business men to pay more attention to what other business men are doing, and so

increase the likelihood of mass action rather than individual initiative.

What are the results? The whole business community has become volatile, jittery, and unstable.

The concept of the business cycle has become almost fatally ingrained in our thinking. We have become morbidly introspective, seeking to analyse the state of business confidence. We spend much of our time trying to guess what the reactions of others will be.

Many of our markets, notably the stock and commodity exchanges, become characterized by what someone has called "negative elasticity," a condition in which—exactly contrary to normal supply-and-demand relationships—an *advance* in price causes an *increase* in buying, and a *decline* in price causes a *decline* in buying and an *increase* in selling. Why? Because the participants are trying to beat the game.

Guard Against Mis-Use of New Knowledge

We are not wrong in seeking to turn the light of knowledge on the ways of business, but we are now in that stage of understanding with reference to the business cycle where a little knowledge has proved to be a dangerous thing.

If we still had a lot of ignorant business enterprisers who had never heard of the business cycle but who barged in, bull-like, on the assumption that this is a rich country and the future is going to be bigger and better than the past, we should not have to worry about achieving real business recovery.—MALCOLM P. MCNAIR in *Credit and Financial Management*.

Our Exports CAN Be Built— Government Help is Ready to Hand Here it is . . .

DURING 1938 foreign manufacturers and producers sold to this country £387,900,000 more goods than British business men sold abroad. Some deduction, of course, must be made for such items as services, insurance and other "hidden" sources of income which this country gets from world markets. But the real adverse balance nonetheless is enormous, and it does represent trade which British manufacturers might and should do.

In the past few months there has been some awakening on the part of British business leaders to the urgent need of developing export trade.

Subsidized competition from the Totalitarian states has in some part been responsible for this. Also it is recognized by industrialists as well as by the Government that, unless British business men get a bigger share of the world's markets, prosperity at home must remain restricted.

Hitherto British firms doing export trade have worked largely on their own in developing markets. That this "lone wolf" practice no longer can maintain success is obvious. Competition met is not from other firms or even industries but from the organized industrial resources of entire nations.

That is why the directing force behind British business is a new and vigorous policy of co-operation. The Government is co-operating with the industry; one industry is co-operating with another; firms are co-operating with each other.

Co-operation Policy Helps You Build Exports

Co-operation will be the keynote in British effort to rebuild exports in 1939-40. And this is the reason, too, why hundreds of firms which have not previously troubled much about overseas markets are now interested. *Opportunities to develop fresh markets are arising. It is up to every business executive to find out if, where, and how, his firm can contribute to its own and the country's well-being by building up export sales.*

Whether or not you have been in export trade before, the first essential to doing business is to have complete and accurate information about every market in which your company's products could sell. To get that information from all markets is an economic impossibility for the average firm. Even very big concerns cannot afford to maintain an intelligence service on this scale. Certainly the ordinary small manufacturer could not even afford to cover one market in this manner.

With the resources of a world-wide diplomatic and commercial organization, the Department of Overseas Trade will tell you. . . .

1. Where to break into new overseas markets
2. How to avoid offence against racial customs and courtesies in selling and advertising .
3. How to meet difficulties about customs' regulations, pure food laws, merchandise marks, etc.
4. How to pack, insure, ship and meet communication and climatic problems
5. Give you detailed information on foreign competition and prices; will find class "A" agents to handle your products
6. Issue reports and surveys of all markets that forecast good or bad conditions which safeguard your credit and liabilities

By
C. E. DAY

There exists, however, the Department of Overseas Trade, a government organization built up by the aid of leaders in industry and run for the benefit of all British business men who do or could do export trade.

First of all, you must get out of your head that it is "just another government department." It is not. It has cut out red tape. It is in touch all the time with executives in competitive industry. It has the assistance of leading business men, and it has built up a series of services unrivalled in the world. And all these *free* services are at the disposal of any British firm.

Before I show what services are available, let me first prove how vast the organization of the D.O.T. is. Its executive personnel includes: 18 Trade Commissioners in the principle dominions, 50 Imperial Trade Correspondents, 600 Consular Officers, and 36 Commercial Diplomatic Officers in the principle foreign countries. These various representatives, spread all over the world, have access to sources denied any private firm. They get "inside information" that can be of value in countless ways.

Backing up this work is the Overseas Trade Development Council, mainly composed of leading men in many spheres of business. These executives are all the time examining export trade problems, studying present and potential

markets, reviewing trade trends and inviting reasons for any kind of export of particular trades and suggesting remedies.

The services of the D.O.T. can be classed roughly under six heads: (1) standing information; (2) commercial news; (3) economic surveys; (4) exhibitions; (5) overseas organizations; (6) overseas trade development. Let us examine some of these and see what help is available for you.

Six Specific Aids In Solving Problems

First of all there is that general head, "standing information." This can be divided into six sub-sections: (1) statistics; (2) prices; (3) customs tariffs and commercial legislation; (4) shipping and communications; (5) salesmanship and publicity; (6) names of United Kingdom manufacturers.

Anything of a statistical nature relating to export trade can be obtained from the D.O.T. If the Department has not got it, it will get it specially for you. For example, if you want to know what quantity and quality of cutlery are sold to Bolivia, the D.O.T. will give you these figures; if you want to know the prices at which these goods are selling, they too can be obtained.

It may be that you would like to see samples of goods made by your foreign

competitors. The Department will get them for you.

Not long ago a manufacturer got an order from a country in the East. He lost about £4,000 on a big consignment because he did not look into the commercial legislation of the country. He shipped his goods complete instead of in parts. The customs tariffs and commercial legislation section of the Department can always give you clear and up-to-date information about such matters. Details concerning regulations, restrictions, certificates of origin, travellers' licences, merchandise marks, pure food regulations, and so on, are always available.

D.O.T. Gives This Kind of "Tip"

Many firms know to their loss and regret the mistakes made if you have not full information about shipping and communications. For example, a company in the North recently sent a consignment of goods to one of the South American states. They did not know that the goods had to make a long journey by river boat and pack-mule. The result was their carefully packed cases had to be broken open and re-packed by native labour. Much of the consignment arrived damaged and useless. The D.O.T. can "put you wise" about a hundred and one little snags of this kind as well as give the more general information.

Most business men know the classic example of drinking tea during a business talk with a Chinese. The moment you touch the tea, the interview is automatically concluded. In every country there are certain customs and courtesies which must be observed if you are to be successful in business. Not only are there many small difficulties in personal contacts, but you may easily make costly errors in advertising, in packaging and in other ways. An hour's conversation with D.O.T. experts on salesmanship and publicity in any foreign market will save you time, labour, money, and prevent loss of business.

In developing export markets you need agents. The D.O.T. can give you a classified list of local importers, with details about the goods in which they specialize, their experience in handling U.K. goods, their financial and trade standing, and so on. If the list supplied is not suitable, the Department will make a special investigation to get names and particulars of suitable agents.

For Inside Information Join the Special Register

News of what is happening in all markets is, of course, necessary to any exporter. The Department collects all the time details of contracts put up to tender by foreign governments, municipalities, and private firms.

If you want to keep right up to date with this commercial news, get your name on the *Special Register*. This will cost a guinea a year, but the service pro-

vides you with business information constantly coming in from all parts of the world. A good deal of this information is highly confidential, and an injunction of secrecy is laid upon you.

Many firms do not go after overseas

trade because of the rapidly changing conditions in most foreign markets. This fear is justified unless you can get reliable, first-hand information which will provide protection against losses
(Continued on page 52)

Executive 'Folklore' Debunked

Business Chiefs Do NOT—

1. *Make Split-second Decisions*
2. *Have Desks Loaded with Gadgets*
3. *Act the 'NO' Man Surrounded by 'YES' Men*

By HERBERT EMMERICH



IT should not astonish us unduly to discover that numerous traces of folklore are discernible in the field of executive management. Even the terminology of management is cobwebby with traditions and mysteries which, like primitive totems, have become objects of worship and blind acceptance in everyday life.

Three clay idols which in the opinion of the writer are particularly worth shooting at are presented in this gallery of executive management folklore. These idols are presented in the following phrases summarizing certain prevailing conceptions of executive behaviour.

1. *"A good executive acts quickly and sometimes is right"*

As in the case of many epigrams, or indeed of fairy tales, this one contains certain elements of truth. Every executive must be capable of making decisions, and at times decisions based on hunch, necessarily involving great risks, must be taken. But in most large-scale enterprises under normal conditions this proposition is pure myth and quite dangerous. The top administrator's job in such a setting is not, as the phrase suggests, to do a lot of things himself but to see that other people do the things that should be done. Very frequently, indeed, he should act slowly, and often he should not act at all. It is normally desirable for the executive so to conduct his organization that he must make the fewest possible decisions. These decisions should be primarily in connection with the formulation of policies and programmes and with the

assignment of responsibilities. Major decisions should be arrived at as slowly as possible without prejudicing a result.

Finally, the executive must be right in a majority of cases or he will, and must be, replaced.

2. *The more gadgets in his office, the better the executive*

A huge, polished desk, liberally provided with telephones, push-buttons and other gadgets, is part of the folklore of the highly-powered executive.

Office gadgetry is important and useful only if it implements the executive's facilities on the incoming as well as the outgoing side. A good rule for gadgets would be: when in doubt throw them out. Anything that makes an executive more accessible, and his surroundings less mechanical, will aid in his primary function of releasing the relaxed and uncensored incoming material from the human beings who comprise his staff and upon whom he must rely.

3. *The good executive is a "NO" man entirely surrounded by "YES" men*

This part of executive folklore is quite prevalent, although to state so absurd a proposition is essentially to refute it. The ideal executive bends most efforts towards discovery and release of the creative forces of his organization, not to their repression.

Even when he says "No," he will aim to make it an educational, not a deflating, experience.

The above appeared in the American publication, *Public Management*; but this executive "folklore" is not without its believers even at home here, so Mr. Emmerich's "de-bunking" was worth extracting.—ED.

"We Want a National Register of all INDUSTRIAL BUILDINGS and PLANT"



says

GRAHAM CUNNINGHAM

Managing Director

'Triplex' Safety Glass Co., Ltd.

IN the two previous articles I dealt with the National Register in so far as it affected personnel—stressing the need for such a Register and giving a description of the application of modern business methods to its compilation and upkeep.

Of equal importance are buildings and transport, and in this article I propose to discuss the purpose of applying the principles of the National Register to these. As it is of little use merely being destructive in criticism, I will show how such extensions of the Register would be compiled and kept.

Industrial premises and plants will be required at short notice to turn from peace-time to war-time requirements. It is vital that we should have an intimate knowledge of resources and possibilities.

Every industrial plant and property should be registered with such details as:

1. Size.
2. Type of Product.
3. Capacity.
4. Location.
5. What type of war product it could undertake.
6. Potential output capacity.
7. Its defensive qualities.

Equally essential in the interests of all is that firms should know whether their plant and property would be required for war products and, if so, the type of products. They can then familiarize themselves within the new conditions which a National emergency would impose.

In other words, we must prepare for co-ordination and avoid confusion.

It is obvious to any thinking person that in every town there will be a large percentage of the population which cannot, for various reasons, be evacuated. Those engaged on important industrial tasks will be needed where the work is to be done. They must be protected by

some form of social and domestic service if they are to function satisfactorily.

Where are they to be housed?

Obviously there must be a census and a register of a type which will show quickly the different classes of properties and their suitability for whatever purpose they may be needed.

It would be useless to await an emergency and then, in confusion nearing chaos, expect to be able to get everything ready after a warning had been given.

We must know who and how many people are not to be evacuated from any given place, and we must know where they will be housed.

Comprehensive Register of Property is necessary

To prepare for the emergencies we must have a comprehensive register of properties that covers their construction (i.e., cellars, basements, etc.), location, capacity and suitability for clearly defined purposes.

We are unfortunate in that an attempt has been made to do much of the work necessary for such a survey, but, because the Government will not give a lead to local authorities as to an approved method of collecting and utilizing such information, the value of the work done is lost.

This brings me to the manner in which a business man employing modern business methods would do the survey. As in previous instances I am introducing nothing *new* but something which has been proved by the more progressive local authorities for *this very purpose*. Moreover, it has been proved for many years.

Every property and plant, whether industrial or otherwise, should be recorded on a card similar in principle to the one illustrated, which has been successfully used for a survey by the local authority.

These records should be standardized—on the instructions of the Government—so that every local authority would have its methods uniform throughout.

The Register of dwellings and factory premises could quite easily be kept by the rating and valuation department of the local authority, which has its existing machinery (for checking and keeping up to date) always in active operation. Here would be the centre of information, and the work of co-ordination would be in the hands of people whose everyday work is to handle classifications of premises, etc.

Here may I again stress the absolute need for a "lead" from the Government.

Whenever local authorities are required to take part in any Government

(Continued on page 44)

CITY OF LIVERPOOL HOUSING ACT, 1935—OVERCROWDING SURVEY									
1. ADDRESS					2. NAME & ADDRESS OF OWNER OR OCCUPIER				
3. OCCUPYER					4. NAME OF RESPONSIBLE TENANT OF WHOLE HOUSE OR PART				
5. DATE TENANCY COMMENCED					6. TYPE OF HOUSE				
7. DATE OF SURVEY					8. DATE OF SURVEY				
9. NAME OF TENANT					10. NAME OF TENANT				
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97. NAME OF TENANT					98. NAME OF TENANT				
99. NAME OF TENANT					100. NAME OF TENANT				

A card similar in principle to this used by Liverpool authorities for a housing survey, could record all necessary details about property and plant. If a National Register was built up from this type of standardised record, co-ordination would be country-wide

It's ENTERPRISE that Puts Up Profits— Being Topical to Get Extra Business— Ideas are Development Capital

Aggressive Policies Still Get Business

THERE is too much business apathy to-day—and it is not justified. Lack of confidence in political, economic and social conditions is a jaded excuse. It presents an easy way out, a chance to avoid really constructive thought and enterprise. It is the attitude of defeatists.

Business can be expanded, production increased and new sales records made. To say so is not optimistic eye-wash or the bleating of uninformed and enthusiastic fools. Enterprising business leaders are proving daily that profitable trade awaits development.

Examples? Certainly. One firm producing a food product has increased its sales by over 100 per cent in the past year; a company manufacturing a household line has put up sales by 50 per cent in the past six months; a manufacturer of electrical goods has raised profits by nearly 15 per cent and turnover by about 60 per cent since January 1938.

There is plenty of business in other than the armament industry. But you must go and get it.

Trade Doubled in "Difficult" Year

LET me quote Mr. H. W. Adams, managing director of Campbell's Soups Ltd.: "I am surprised at the apathy among heads of businesses," he said. "They all talk about 'lack of confidence' and 'conditions being bad.' They say it is not the time to develop business.

"They are wrong. We have proved that. By ignoring pessimistic warnings and by following a vigorous policy of market development we have raised sales 100 per cent in the past eighteen months.

"We are not a wonder organization," he continued. "All we have done is to drive ahead for business—and we have got it. In my opinion too many executives allow themselves to be subdued by external conditions, real or imaginary. In that way they contribute to the feeling that business lacks confidence.

"From our point of view," he concluded, "I am glad so many firms take a cautious view of trade conditions and opportunities. That means we get our business without such stiff competition. And whatever other firms intend to do, we are carrying on with our plans."

In January Campbell's sales were 120 per cent up on the corresponding month of a year ago, more evidence that enterprise and vigorous policy pays. The puzzling feature is that business men in general do not realize what opportunities they are missing.

This Type of Policy Has Headlines Support

SEVERAL firms, notably in the food-stuffs trade, have turned one factor of the present so-called woeful situation into an opportunity to use a fresh sales-approach angle.

Taking advantage of the semi-official recommendation to the citizen to lay by, in his house or his A.R.P. funk-hole, a week's emergency supply of canned (or otherwise preserved) food, some firms are nationally advertising special packs of their products for this purpose.

The canned soup, fruit and milk manufacturers are foremost in this. But there are scores of other manufacturers who could show a similar sort of enterprise. To do so does not suggest that you are accepting possible threat of a crisis in a pessimistic way. On the contrary, it is plain common sense, this turning a so-called black outlook into a bull point of considerable value.

Some years ago, I recall, establishment of the grid system of electrical distribution might have been considered

By the EDITORS

a threat to the life of a big company that had built its business on the supply of small electric light sets to private homes, farms, cinemas and little manufacturers in country areas. But did this firm go down on its knees before the advancing pylons of the great grid system? Did it succumb to defeatism? Not a bit.

It got busy making special stand-by sets to meet grid breakdowns! Result: This firm went on expanding its business faster than ever.

That is the aggressive spirit that is wanted now. It pays.

THE little firms as well as the big firms can display this spirit. Enterprise does not depend on money, but on brains, on ideas, and the courage to do something.

Ideas are not the monopoly of the heads of companies or of sales managers. Now, therefore, is the time to encourage suggestions from your staff.

If you have not a suggestion-box system already running, introduce one.

Do not say: "Oh, my staff is too small, it would not be worth while." A good idea is worth while, however you come by it. You cannot afford to overlook any chances of adding an asset to your business.



This new type of executive desk, made by Roneo Ltd., has projecting ends for the use of visitors or your secretary. The innovation increases considerably the comfort and working efficiency of your secretary during dictation. The extension surface also provides you with valuable extra working space.

GOODS TRANSPORT

The TRUTH From Business Men's Viewpoint in Cash, Service and Convenience

THE recent activities of the railway companies to regain public sympathy have created a situation which may influence business transport. Certainly all transport executives should review the subject of goods distribution. It is time for an impartial survey of rail, road or inland water transport. Every executive should be able to determine immediately the effect of any change proposed in transport facilities and conditions. That is necessary to protect the interests of individual firms and of industry in general.

It is easy to obtain an erroneous impression of facts as the result of one-sided propaganda. For instance, if the railways were really in a desperate position, the state of industry would soon become almost equally so. But they are not.

It is true that the railways are failing to earn the net profit which Parliament decided they should be allowed to make. But, as leading authorities have explained, if railway debentures and preference dividends were reduced to the level of many other securities a reasonable return could be paid on ordinary shares even now.

This is Way Railways Could Reorganize Services

Furthermore, it has been suggested that railway capital should have been written off, as the case of industrial concerns following years of depression. This would allow the companies to start afresh in reorganizing their services to satisfy conditions that have undergone immense changes during the past 50 years.

Whatever remedies be adopted, it is essential that the claims of industry and public interest shall not be allowed to assume secondary importance.

The alleged losses in railway traffic and the present drive for a "Square Deal" do not concern the average trader to the extent popularly imagined. A principle which must always be kept in mind is this: Every transport user must have complete freedom to choose the form of goods conveyance he considers best for his individual requirements.

The fall in railway revenues is due not



By RICHARD

TWELVETREES, A.M.I., Mech.E.

so much to the competition set up by other forms of transport as to decided changes in industrial conditions. This is particularly true in respect to manufacturers' distributive policies.

It is plain common sense for a large concern to reduce transport costs by transferring production to locations where greatest sales demand exists. The new factories erected around London and other large cities indicate the trend. Traders realize that it is worth while to make stocks available at local sales centres. Distribution by road over distances of, say, 25 miles, pays as compared with bulk deliveries over greater mileages. The old method leaves the customer to carry big stocks and manage his distribution as best he can, a condition not tolerated in modern business practice.

The use of motor vehicles for *bulk deliveries of raw materials* is one of the big issues. Why is this motor transport used? I have little hesitation in asserting that it is due in part to the prejudice of industrial transport executives. Having encountered difficulties with rail transport in the past, they decided to be independent of the entire system. They took up the difficult and complicated task of running their own transport in competition with the railways.

This trend provided an opportunity for certain transport hauliers to "tout" for loads at cut rates. They have profited from "pirate" transport which, despite legislation, remains active today. It is very difficult to prevent a haulier who has conveyed a load, say, from London to Manchester at a normal charge from picking up a return load

Rail, canal and road each can be used economically and efficiently if transport executives have high administrative ability. In this article Mr. Twelvetrees explains how executives can solve transport problems

at a rate to cover little more than running costs. These facts must be faced, though in theory they may be non-existent.

Development committees of the railway companies are very much alive today to the factors which have created prejudice against them and are striving to offer exceptional service as well as to meet customers' requirements in every way. If traders will take trouble to state their needs they will get a fair deal as far as the legal restrictions of the Railways Act, 1921, will allow.

The same applies, of course, to the help rendered by recognized road transport contracting concerns, although as a rule the customers' problems they have to solve are far more simple than any put to the railways.

Difficulties Often Fault of Transport Managers

Many rail transport difficulties have arisen because customers simply consigned goods to destinations. They left everything to the railway companies without least consideration of rail traffic organization. When inevitable delays occurred, the railway company has been accused of bad management.

I discussed this point recently with the transport manager of a large firm that handles industrial products manufactured at plants in Scotland, north-west and south-east England. The products are distributed in all important provincial centres.

Some years ago, he said, rail transport conditions in this company, from his firm's point of view, were more or less chaotic. To establish reliable services between distribution centres, ports and

factories, it was necessary to make personal calls upon railway officials in the various districts. Difficulties were threshed out on the spot, which is very different to lodging complaints at railway headquarters.

Planning with the Railways Was Profitable

There was no complaint about railway transport in principle for certain classes of goods. The job was to plan ways and means for co-ordinating the firm's requirements with existing and modified rail facilities. Each class of goods was considered on its merits. In a short time the whole scheme was established on a sound basis. The result was (a) enormous transport economies and (b) organized goods traffic services over main and branch lines, run to time schedules comparable with those of main-line passenger trains.

There we have an example of *real management* in railway transport. It contrasts strongly with the common plan of using motor vehicles indiscriminately. That merely succeeds in adding to highway congestion and does not solve the problem.

Similar organizing ability can be applied to inland water transport. Certainly firms should use in fullest measure this cheapest means of transport available to-day. But successful use cannot be made of canals or railways if transport executives presume that railway or canal companies will undertake the traffic management of any individual concern. They provide the facilities. It is up to business men to do their own transport management.

Without doubt, a major key to any firm's transport problems is the executive in charge. And it is here that so many concerns make a vital mistake. Industrial transport management is difficult. The manager is responsible for the movement of raw material into the factory as well as delivery of manufactured goods to customer or retailer. Amongst other essential qualifications the executive must have (a) expert knowledge of transport law affecting rail, road and canal operation, (b) engineering experience, (c) buying and selling ability, and (d) high administrative ability.

Executives Are Used In a Wrong Way

Too often, however, his work is reduced to that of a mere haulage contractor for the firm. He is expected to compete on unequal terms with fully organized road transport contracting concerns.

That raises the contentious problem of owning and operating a transport fleet. Is it fully justified by results obtained, or is it more satisfactory to use hired vehicles?

A few years ago it was comparatively simple to control a fleet, but since new regulations and restrictions were imposed the position is much changed. Rather than organize special clerical and semi-legal departments to deal with the

extra work, many firms prefer to leave these responsibilities to transport contractors. These firms supply transport on a clearly defined all-in basis to meet any given set of requirements.

The contracts for such transport will cover any form of agreement. They range from simple hire of vehicles, handled by customers' own drivers, to provision of fleets, decorated with the hiring firm's own trade devices. Contracts include insurance of vehicles and their contents and the issue of fidelity bonds when money is handled by the contractor's employees. There are clauses to cover all possible eventualities liable to arise between the two parties.

Firms whose dispatch work can be managed with the aid of from 5 to 10 vehicles, generally find it is economical to own and operate a fleet. In bigger transport service ownership is of doubt-

ful value and needs careful consideration.

To sum up, one can say that rail, road and canal companies offer good transport facilities. The vital factor is how the facilities are used. The key to the whole problem, therefore, is the executive in charge of transport. If he is given full authority and has high administrative ability, all available transport facilities will be properly used. He will know whether the company should own a transport fleet, how much it should use road facilities, when rail service is better, and to what extent the slower but lower-cost service of the canals can be employed. He will be guided by facts and figures, not prejudice.

The railway and other transport companies have nothing to fear from this type of executive. His only basis of discrimination is efficiency and economy.

£10,000 a year MORE PROFIT Through this Management Policy Re-Plan

A COAL combine (wholesale and retail) in the Midlands recently succeeded in raising its year's profit by about £10,000 without greatly increasing the volume of sales. This extra profit was gained by having the whole of its marketing policy reorganized. Whereas formerly the combine had simply "sold coal," the re-plan was the result of a wide survey which found out that sales could be much increased if the marketing was carried out according to certain date as to *time and quantities*.

Market Research Found Right Time To Sell Product

The research discovered that for every customer there was a right time to sell him coal and that there was a most appropriate quantity to offer him.

This market research was carried out by what some people call a "business doctor," who was actually, of course, a first-class management consultant.

In this case the consultant carried out a statistical investigation of the coal markets supplied by the combine. His report analysed the buying power and trends of the markets, month by month. It showed that costly errors were being made in sales campaigns, that drives to push up sales of certain lines were made at wrong times, that vital market factors were not considered and that no logical plan of selling was formulated and followed.

Costs of storing and handling coal have also been much reduced, and salesmen now get week by week instruc-

tions on how to plan their rounds. The scheme extends right up to the fundamentals of good management.

MANY readers were interested in the 64-page air mail catalogue which went overseas for 1½d. postage (BUSINESS, January, page 12). We received so many inquiries about the type of paper used that we have decided to publish the fact that it was an Oxford India paper, B quality substance of 7 lb. demy. It gives highly satisfactory opacity and printing surface for half tones.

Keep After IDEAS

In the office of an executive we visited recently there was a large pile of trade and technical papers, still in their wrappers. Many of them were months old; few of them would ever be opened.

"Simply haven't time to get at 'em . . ." was this executive's reply to our inquiring eye.

Yet trade papers, technical magazines, and so forth are wonderfully fruitful sources of ideas for the business man.

Ideas are the life-blood of business. A man who can trot out ideas has it all over the man who is merely a good worker.

Modelling an organization too closely along the lines of another successful one is beset with danger, because you never can get the same individuals or another set of executives exactly like those of the organization copied.

Bonuses More Effective Than Picnics

WITH the approach of spring one of management's jobs is to consider staff holiday arrangements for the summer.

In this connection the remarks made to us recently by the head of a large firm with retail and wholesale branches throughout London.

"We spend no money on annual staff outings," he said. "We consider that these mass seaside trips tends too much to develop the 'clique' spirit. However well organized the picnic, branch members cling together, head-office staff do the same, section managers, works staff, transport men, all isolate themselves in compact little groups like so many strange units.

"Our idea is to avoid this and instead to get everybody's wholehearted interest in the progress of the firm itself. We therefore devote our funds to providing internal incentives. We have a bonus scale for almost every kind of work. We are anxious that all our staff shall have as high an earning power as possible.

"The state of our business, and the way we came through the recent crisis with hardly a noticeable fall in turnover convinces us that our policy is right."

Invoicing Short-Cut

IN a well known department store the top half of the invoice containing the address of the customer and date of the invoice is made detachable.

Above the tear-off line appear the words "Please detach this stub and return it with your remittance. Your cancelled cheque is your receipt."

Thus the return of the receipt and invoice to the customer is unnecessary.

They Don't Forget This Jubilee

MANY firms, on reaching their Silver Anniversary of successful business throw a party or have some sort of appropriate celebration. Actual and prospective customers are invited and the whole thing is planned as a goodwill builder.

But people's memories are short. Anniversary celebrations, however costly or well put on, do not remain long in the minds of the revellers.

The head of a well known firm in the United States, in staging his company's 25 years' celebration during last year, aimed for greater permanence.

From the "birthday" until the end of the year all the firm's correspondence goes out on special blue stationery on which is embossed a silver medallion. The typing is done with a special silver ribbon and signatures

are made with a "silver" drawing-pencil.

Nobody in contact with this firm could thus forget that 1938 was its jubilee year.

Incidentally, the firm concerned manufactures office equipment.

Obviates Tying-Up Stock

HERE is a "stock" rule by which one of the big motor-car manufacturing firms bases its main stock distribution to appointed dealers:

The sales of specific articles up to 250 per year are carried at the main works office.

The sales of specific articles from 250 to 2,400 are carried at four geographically located branches.

The sales of specific articles from 2,400 to 6,000 are carried at sixteen geographically located branches.

The sales of specific articles from 6,000 up are carried at thirty-five geographically located branches.

IN manufacturing firms making a wide range of products the cost of producing and issuing catalogues and other publicity matter amounts to large sums of money each year. Everything possible should therefore be done to control this cost.

In one firm, all customers, prospects and inquirers are graded into three main categories, "A," "B" and "C," according to their size and potentialities from a selling point of view.

They are listed in the firm's mailing index on red, white or blue cards, according to category. When mailings are sent out this plan enables the publicity department to ensure that the most expensive matter is kept (broadly) within the class "A" prospects, and not wasted in the other classes.

PROFITS UP Despite Restricted Turnover

(Continued from page 8)

tive over the past six years, while if he wants any item in greater detail he can get it at once from the appropriate cost analysis sheet, right down, as I pointed out, to the cost of typing letters.

Therefore, with every cost of the business broken down and reported, it is a simple matter for the management to know, by keeping a finger continually on the pulse, exactly how each item of expense stands, and at what point and in what direction to take any needful action.

Uses "Return of Returns" As Check

Here is something worth noting. When the chief executive of a firm requires a number of returns to be rendered to him at various times every day it is an easy thing for him to miss one if it does not come in to time or is omitted altogether. Mr. Upjohn guards against this by having what he calls a "return of returns."

This is just a single sheet listing any return that is not in at the due time. Instant action can then be taken with any recalcitrant department concerned.

As most of our executive readers know, once a department sees that lateness or omission of a return is not noticed by the management, the people involved begin to think that return is not so important after all, and they start to get slack about it. Mr. Upjohn's plan prevents that.

While the secret behind Stewart & Arden's ability to increase profits on restricted turnover was undoubtedly this complete control of costs, a further contribution in this direction must also be mentioned. A study of all possible

economies was made, and these were rigidly carried out.

It is usually found that the most progressive businesses are the most economical. It is not surprising, therefore, to find that S. & A. have a full-time "economies" man on the staff. During stringent times such a cost-chaser is doubly valuable, and he contributed in no small measure to the Company's successful war on costs during 1938.

This cost-cutter has a roving commission. He travels everywhere throughout the organization. He has no authority to give orders on the spot, but he makes recommendations to the management, which O.K.s them for action, if approved.

Summing up, it can be said therefore that Stewart & Arden's achievement of increased profits, despite restricted turnover, was due solely to the successful management of costs.

Flexible Cost-Ratio Control Stands Test

Of course this policy of scientific cost-control is exercised just as rigidly in good times as in bad. But, whereas almost any type of management can keep a business running more or less successfully in good times, Mr. Upjohn has demonstrated the truth that only a flexible management operating on a basis of cost-ratios can stand the test of hard times.

Mr. Upjohn paid tribute to the enthusiasm of his co-directors and stressed the loyal support received from the staff.

Such results, he emphasized, can only be achieved by true team work.

THE TREND OF TRADE

"Two Months STEADY then, maybe, a Slight Rise - - -"

says C.C., 'Business' Economist

THE situation has stabilized itself since last month. Business is maintaining a steady level, below 1937 but above 1936. Enterprise is still stagnant, but confidence is slightly improved.

There are three reasons: (1) America has got over its jitters and the situation looks slightly better. (2) The markets are becoming inured to the "tenterhook tactics" of the Totalitarian states. Nerves are toughening. Each new rumour frays us less. (3) More energetic measures for defence at home and for fresh attacks on markets abroad have increased confidence in the country's leaders.

Pros and Cons Of Business Outlook

BUSINESS dipped disastrously between September 1937 and March 1938, ran level between June and September, dipped again slightly in the autumn. Now it is once more running steadily at only a slightly lower level. The forces working against any slight improvement are fears of the Budget, the danger of a crisis in March, an almost certain autumn election.

Probably business will remain on an even keel for another couple of months with a possibility of a slight rise in April.

Heavy Industries' Loss Being Made Up By Light

ANYTHING like a steady level of business activity is always the complicated result of the balance of innumerable warring forces. For the time being rearmament, iron, steel, and the consumer trades are balancing the declines in building, coal, cotton, shipbuilding and the clothing trades.

This is the reason for the slight fall in employment (35,000) in January from a year ago. New entrants largely account for the increase in unemployment by 211,000. The average time of unemployment is shorter than for many years past. Already the normal seasonal rise in February is shown by the Ministry of Labour.

"Them Foreigners" Still Buying Plenty

THE shrinkage in overseas trade is less than had been expected, considering Germany's increased competition and the Chinese and Spanish wars. Imports are down by 11 per cent on a year ago but equal to those of 1937. The fall is largely due to lower prices. The fall in exports amounted to about

HERE ARE THE REASONS

1. *America has got over 'the jitters' about the international situation*
2. *Markets are becoming inured to 'tenterhook tactics' of dictators*
3. *Defence measures have increased confidence in the country's leaders*

Prospects of an autumn election, fears about the budget and about an international crisis are not factors weighty enough to hold back enterprising firms.

4.1 per cent, much less than the fall in prices. Encouraging is the rise in the imports of raw materials for the wool and jute trades and non-ferrous metals; discouraging the further fall in the volume of raw materials for the textile industries.

These figures are far better than the recent trend of overseas trade seemed to warrant.

Building is still in recession. The fall in plans passed for new houses is still around 40 per cent, but factory construction actually shows a considerable rise. Apart from Government orders, plans passed for new factories since October are £3,650,000 more than a year ago. This is a handy cushion for the fall in house building.

Purse Strings Are Open In The Mass Market Now

PEOPLE continue to buy generously in the mass market. Despite the shyness of the wealthier consumer, despite lower prices, sales were up by 1.9 per cent in December over last year. Reports of the January sales are scarcely so good, but I do not anticipate a heavy fall. This is one of the best features of the present situation. The timid consumer is confined to the West End of London and the monied classes in the cities and "county" districts. With this interesting side of the present buying position I deal on page 19.

These Wages Should Mean Your Sales Are Going Up

ALTHOUGH profits have begun to fall, wages are still rising—even railway wages! Last year the L.M.S.

paid £900,000 more in wages than a year ago to a smaller personnel. Where is the managers' vaunted foresight? Wage rates continue to rise slightly in all armaments trades despite Government efforts to control them.

Both the iron and steel trades staged a remarkable revival in January. Motor sales, too, continue to soar, but stocks are still being used, and production has not yet reached last year's level.

Of the unsheltered industries there is little good news. Shipbuilding continues to languish. The demand for cotton has improved slightly during recent weeks, but output is at a record low level. The coal industry, if working at a slightly better profit, is still running at a low level. South Wales frankly admits that its prices are too high for most overseas competition, save under agreements.

With Living Costs Down, More Cash For Etceteras

UNHAPPILY raw material prices continue to fall owing to the reduction in American demand. Cost of living, however, follows suit, being now 4 points below a year ago. As wages continue to rise slightly the purchasing power of the consumer is therefore still increasing.

The United States still remains the enigma in the situation. Wall Street and business have got their jitters without recovering any serious degree of confidence. The upward trend of building contracts is indeed the one definite improvement steadily maintained month after month. If Europe waits on America for a lead, America waits on Europe for a hint that the

political cauldron is cooling down.

This unfortunate stalemate alone bars a genuine spring revival, in my view.

These Are 'Raw' Deals For Empire Countries

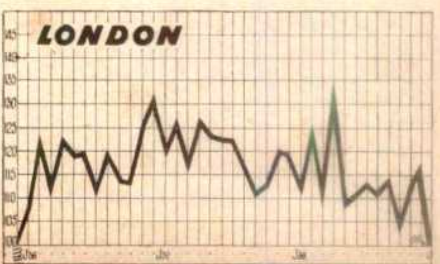
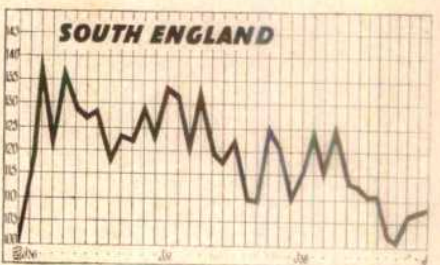
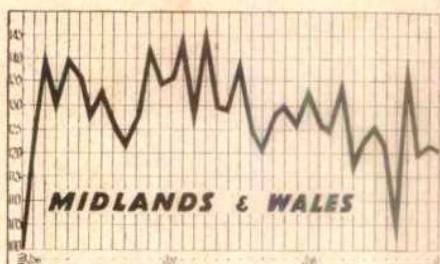
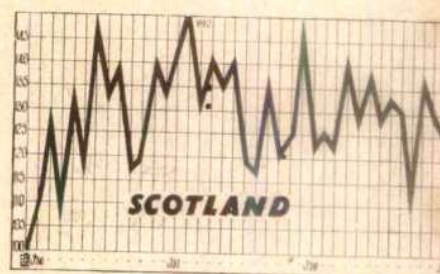
THROUGHOUT the Empire business is affected by low material prices. Canada has still around 2,300,000 unemployed, compared with an average

of 400,000. Happily bumper crops and a partially prosperous industry are helping to mitigate low prices for her farm products and the fall of 15.3 per cent in her exports.

In Australia the situation is much better. Her overseas trade improved last year; so did her industry. Any falling off in her farming revenue this year, due to the recent droughts, may therefore be offset to some extent.



EMPLOYMENT INDICATOR TO TRADE ACTIVITY



In India there has been a pause in the general revival of recent years, but no definite recession. Last year's foreign trade, below that for 1937-38, was far above that of 1935-36. But to India also the fall in raw material prices is a big blow.

Insulated Dictators Need Men and Money To-day

IN Europe both Germany and Italy ask only for more men and more money to profit by the continued boom within their insulated economies.

France continues to clamber painfully out of her long depression, intensified by the Blum decrees. Now there are signs of a broad-based revival getting under way at last.

In Scandinavia the level of business has fallen less than almost in any other part of Europe. This is due to stable economy, far-sighted political and commercial regulation and the link with sterling.

Obviously a situation in which business is still at the mercy of international politics calls for caution, but caution is being over-done in many directions.

Guts and 'Go' Get Profits Nowadays

ENTERPRISE is earning dividends for those companies which are linking their sales policy to the new requirements of the market, which means keeping prices down at all costs, improving service and snatching every stray opportunity in overseas markets.

Too few firms are still making use of the facilities of the Department of Overseas Trade, of the Export Credit Department, of the possibilities opened up by the new Anglo-American Treaty, and of the increasing popularity of British goods in America, the Empire and Scandinavia.

Shared Displays

CO-OPERATIVE selling of goods which might logically be bought together by one customer is a policy that would pay many manufacturers to try out. It is already being practised with success by some of the big chain-stores.

One scheme, for example, which has yielded good results, has been the grouping together of complete outfits of clothes for women and children. This has been very effective in the 'limited-price' stores. While each garment is listed at its selling price, the total cost of all goods concerned is pushed as a sales point. Windows and special display sections inside the stores are dressed to emphasize this theme. A model is dressed in the complete outfit and individual pieces are also displayed.

Small Retailers Will Join Your Scheme

While it is true that such a marketing idea presents difficulties in execu-

tion for the manufacturer not selling to big stores, it is certainly worth organizing. Small retailers are willing to co-operate, which is an important point.

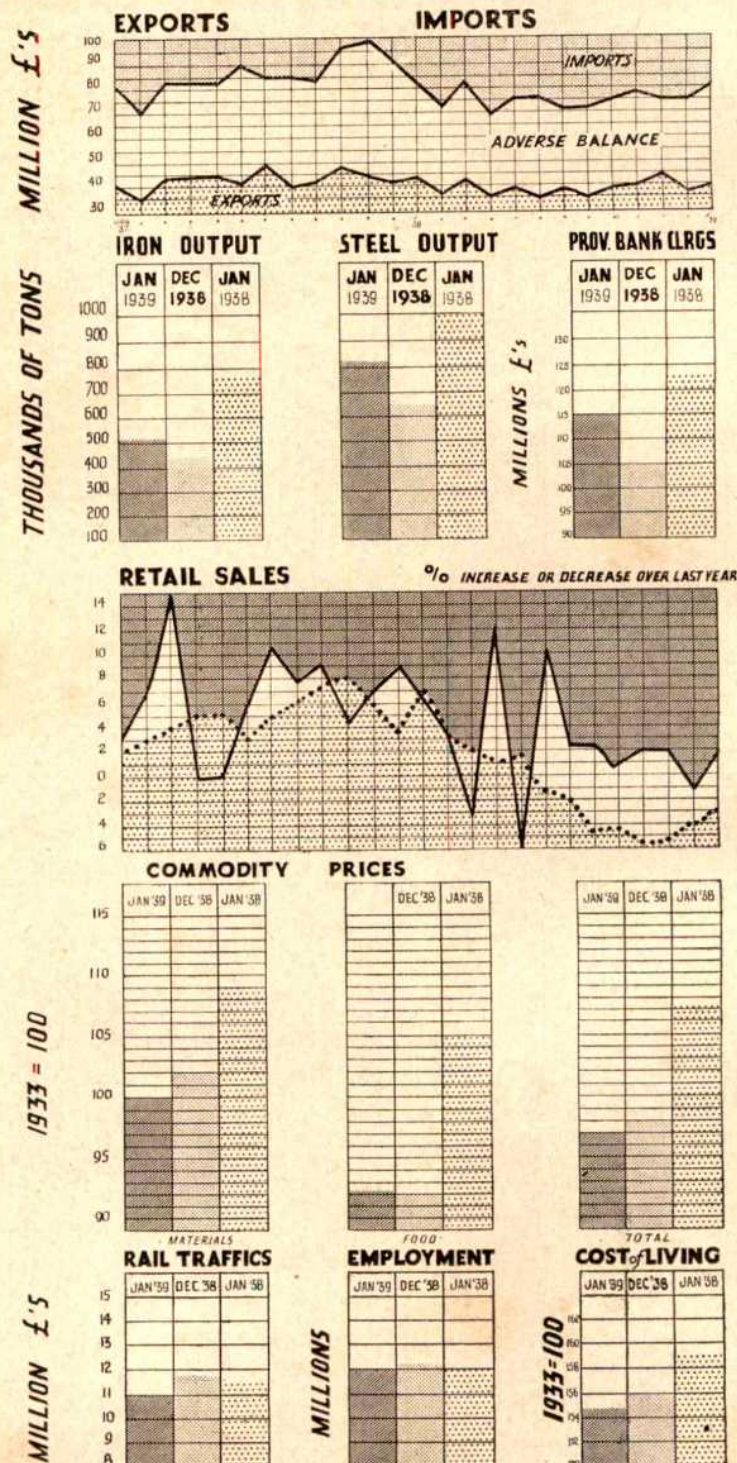
The most difficult part of the scheme is your job, as a manufacturer, to select other manufacturers who can and will co-operate with you. For this, the necessary factors are: (a) goods that

can be sold in a common display; (b) common retailer accounts; (c) agreement on the nature of the display; (d) forming the organization to run the display.

These are not impossible obstacles to overcome. Once the machinery is formed and in operation the idea can be developed and extended to the benefit of all concerned.

GUIDING FACTORS IN THE TREND—

All comparisons are with similar month in last and previous month in this year



Your CONSUMER is "On The Move"

Where to Find Him NOW . . .



HAVE you not now and then recently in driving along some quiet country road suddenly found it crowded with cars and cyclists six abreast? Yet there are no fine offices nor factory chimneys to be seen.

You are probably passing a modern armaments factory. Seclusion and camouflage are part of the technique; nothing more obvious than small mounds marks the place.

This explains why the little town of Wareham in Dorset, for instance, has

by
CECIL CHISHOLM,
Editor, Marketing Survey of the U.K.

almost no unemployed. It is near to the Royal Naval cordite factory and the Tank Corps depot. Workers are drawn from Bournemouth, Poole and even Wimborne. Some come from the Special Areas of Wales and the North-East Coast.

The population of modern armament factories is apt to rise by 300 or 400 almost overnight, which is as good for the area as the building of a new factory, with housing estate complete.

Often the consumer has moved on only a couple of miles but is using different dealers. For example, take the little (7,000) town of Dalkeith, Midlothian, Scotland, where the oil comes from. The oil well is employing about 50 people. During the past five years the local council has built around 1,000 houses on new estates outside the town. More than half of the entire population has been rehoused, often a mile or so from Dalkeith shops. That mile is changing the channels of trade. The new estates are served by the vans from shops in local villages and the outskirts of the town; shop sales in Dalkeith suffer.

Both at Bournemouth and Blackpool I found people commentating on the prevalence of Welsh voices in the streets. It coincides with the rise in the unemployment rate of Blackpool to over 13 per cent and that of Bournemouth to over 6 per cent. In each case unemployed workers from Wales have been compulsorily employed recently on council schemes to meet requirements for Government grant. The men have not returned to the Welsh valleys, preferring occasional work in congenial surroundings to doing nothing at all.

So the Government's energy in securing greater mobility of labour is affecting the purchasing power of these two wealthy health resorts. Quite sizably, too. Bournemouth, recently the most prosperous of all our large cities, finds itself dealing with an army of well over 3,000 workless folk.

One result is a new programme of improvements, designed to absorb some of this unfamiliar pool of unemployment. Again buying power will be affected.

The consumer is certainly on the move to an extent not widely realized. Thousands of old ladies and gentlemen are buying quietly, building or renting houses and bungalows in the West. But building activity is paralysed in the evacuation areas. It has stopped almost dead even in parts of Surrey, Sussex and Middlesex. Elsewhere it goes on merrily. It will certainly boom in the West country this summer.

Even when he sits still, the con-



In this article Mr. Chisholm reveals that :

The masses are spending money freely - wages are up $2\frac{1}{2}$ per cent as compared with the level of a year ago. In the past six years the average wage has risen 5s. 2d.

Dividends are down on average by $1\frac{1}{2}$ per cent as compared with a year ago. Through this and fear of war, the middle and investor classes are nervous of spending.

Rearmament and other work is drawing labour from depressed areas to health resorts and similar prosperous centres.

Vast re-housing schemes are changing radically the value of retail outlets.

A building boom in the West country and other "safe zones" is coming.

But sales can be increased through :

- (1) *Price reduction*
- (2) *Organised selling*
- (3) *Market research*
- (4) *More service*

In his analysis of the factors for and against business expansion to-day, Mr. Chisholm quotes the example of firms which have used these policies with success.

sumer's purchasing power is on the move.

The shadows of "Führer" and "Duce" still press heavily on London, the centre of tension being Throgmorton Street. Thence the nervous tension seems to radiate, but with decreasing intensity, in every direction. The farther north you go, the greater the confidence of business men and of the consumer. The same is true of the West.

There is a very definite division between the middle-class and working-class psychology. Not without reason. Dividends are down, if only by an average of $1\frac{1}{2}$ per cent, while wages are up by $2\frac{1}{2}$ per cent on a year ago. I estimate that the average wage throughout the country is 55s. 2d. per week, as compared with only 50s. per week average between 1930-1936. Further, the worker has a happy knack of taking the short view, of never crossing his bridges before he gets to them, of discounting newspaper headlines.

Why The Middle Classes Are Nervous

To-day the middle class takes longer and longer views, sees, hears and reads more than ever about the dangers of war, has more to lose in a fresh war.

Here is one explanation (not the whole explanation, I believe) of the continuous fall in West End sales, of the plight of the costume and millinery trades, of the slump in all luxury sales. Instead of worrying about acidity and blood-pressure, middle-class John Bull is worrying about war. Witness the slide in drug sales. (Who could have predicted that the best class of household remedies would still be out of favour, five months after the crisis?)

Contrast this with the results of Marks & Spencer and of Woolworth's, with the phenomenal increase of around 6 per cent in the sales of Cadbury's products last year and with the revival of beer sales.

Tell me the class to which a man's company sells and I can make a fair guess at his state of mind. *Never was the contrast between the easy spending of the worker and the nervous hanging back of the monied classes more marked.*

There are strange exceptions. Car sales came back with a bang in December. The industry is selling far more cars than it did a year ago, although sales during 1938 were down by 15 per cent on the previous year.

The hotels had a splendid Christmas; tourist agencies had a record season for winter sports, beating all their previous figures.

Immediately the crisis developed in September last the cinemas were hit. Business continued bad right up to Christmas. Now suddenly cinemas are packed. The film industry admits the reason is better pictures.

The rise in car sales is part explained by necessary replacements. Then people are feeling just a little better. Many a woman feels just cheerful

enough to let her man sign the cheque for the first instalment on a new car.

Most important influence of all is the slight cut in prices by Vauxhall and other makers. Lord Nuffield once explained to me that every £5 he could take off the price of an expensive car immediately introduced him to an entirely new buying field. The present astonishing spurt in car sales supports his view.

Finally, car manufacturers are among the best showmen in the country. Radiolympia does a magnificent propaganda job.

These factors, including cheaper prices and superior salesmanship, can wrest all possible orders from the most reluctant market.

The same is true of travel agencies. Every year they make winter sport abroad cheaper and more attractive. Their advertising is not merely half a dozen good competitive campaigns, but carefully synchronized as to time, price and types of appeal. One feels that an industry, rather than a series of competing individual firms, is asking your attention. Frame's booklet will arrive on the identical morning that you find Cook's three-column triple in your paper; Commander Studd will be signalling the *Daily Express* on the same morning that Dr. Lunn's new suggestions reach your breakfast-table—all organized salesmanship to overcome the reluctant buyer.

In a few instances concerns have been able to cash in on the general tension. The most obvious success was the brochure of the National Canning Council, "Food in Time of War," with its startling A.R.P. cover. Certain ministers' advice to the housewife to buy ahead provided a marvellous preface to the sales story.

Quick Change Policy Brought Good Profit

Some of the neatest tie-ups were not always so obvious. A concern selling one-day chicks found their business falling away immediately after the crisis. Why buy chicks when your fowl-houses may be blown away any day now?

Very ingeniously the concern switched its advertising appeal to: "Suppose there should be war, what about your food supply? Make sure of a good breakfast by providing your own eggs from your own fowls." The public responded immediately.

Still, the number of products which could find a topical tie-up with the situation is few. What else can be done?

There is one line of attack open to most manufacturers of consumer goods. Remember that all buyers are not shy. The working class are still spending freely. Wherever a cheaper line can be introduced with any hope of success, it is worth testing out, even if it means time, money, trouble. For the present state of public anxiety is unlikely to disappear overnight. On the contrary, it will almost certainly last for many months, and it may intensify temporarily at any moment.

There are more ways of entering a cheaper market than one. Terry's, the chocolate people, stepped from the expensive to the middle-class market from three directions. They produced simpler and less expensively packed block chocolate; they packed some of their best chocolates even in $\frac{1}{4}$ -lb. packets; they introduced these cheaper lines and smaller packets to hundreds of retailers hitherto stocking only the popular lines. Now, after 140 years, they are first using advertising to stress the superior quality of *all* their lines.

Every Firm Needs To Use Market Research

These are major policies to meet the problem of "the buyer with money who will not spend."

One minor policy that yields dividends is to use the results of modern research on every local, industrial and class change in purchasing power. You *ought* to be getting exceptional business in Bedford, for instance. It does not follow that you are.

Bedford's unemployment is almost as low as that of Wareham. It has the highest purchasing power index in the United Kingdom to-day.* Wage rates

DO YOU WANT TO BUILD UP EXPORTS?

In the article on page 9 C. E. Day deals with the world-wide organization of the Department of Overseas Trade.

The Department's services are FREE to any British firm.

are high; it is a charming residential town which is attracting highly paid executives and professional people from Luton.

Obviously, Bedford is only one example of many medium-sized towns that are exceptionally prosperous to-day in many parts of England, Wales and Scotland. Few sales managers realize what has happened.

These Factors Sum Up Conditions Now

To sum up: (a) mass purchasing power is high and active; (b) middle and investor classes have less to spend and are nervous about spending; (c) the migration of labour to health and other prosperous towns is spreading mass buying power.

These are the chief guides to locating the consumer to-day. Success in selling to him relies mostly, as examples show, in price reduction, improved service, better sales plans and a more scientific approach to marketing problems through use of research.

*"Marketing Survey of the U.K." Business Publications, Ltd. 50s.

MARKET RESEARCH Put Up Sales By 53 Per Cent within 7 months

IT is a popular fallacy to believe that when a jam occurs on the log-rivers of Canada there is always one key log to blame. Actually, the lumberjacks have to work strenuously on scores—maybe hundreds—of logs in order to break the hold-up and set the mass running freely again. Not once in a thousand times does action on a single log prove effective.

This picture makes a true analogy of the business problems of increasing sales. For a while sales will increase, then comes a slowing up, followed often by a jam. No further progress can be made. And while it is true that there may be one key factor that is causing sales congestion more often the responsibility is divided among a number of factors.

Most firms at some time experience this type of sales problem and most will agree that strenuous effort in several directions is necessary to revitalize progress.

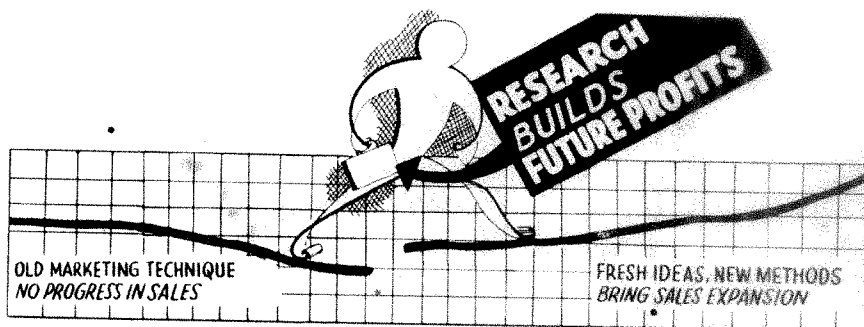
That, too, is the experience of the manufacturers of Larvex, a moth-proofing product. There has been no one key factor responsible for the 56 per cent upsweep in their sales during the seven months under review. At least nine specific points of policy and action are behind the progress made. (1) Vesting full control in the hands of a managing head; (2) Shop-by-shop investigation of sales problems; (3) Development of new sales appeal; (4) Marketing the product in larger sizes; (5) Reduction in prices of all sizes; (6) Devising a new kind of packaging; (7) Change in the advertising theme; (8) Development of the mass market; (9) Improvement of relations with dealers.

The changes indicated in those nine points were sweeping. Let us deal with each in detail and see what part it has played in the drive for more trade.

Larvex products are owned by a corporation. Until the changes mentioned took place there was one central control for Larvex and for all other products of associated companies.

New Managing Director Analysed Every Activity

Development began when a managing director, with full executive powers over policy and plans of the company, was appointed. His first action was to review the history of the product and make a thorough examination of the position. This brought a fresh and direct intelligence to bear on the problem: Why were sales "marking time"?



As one company among several under a central control, Larvex ceased to show increased sales.

Then the policy was reversed.

A managing head, vested with full powers, was appointed to control Larvex. Under his direction an analysis of the company's marketing policies and practice was carried out.

This action led to :

1. *Development of new sales appeal*
2. *Marketing the product in larger sizes*
3. *Reduction in prices of all sizes*
4. *Devising a new kind of packaging*
5. *A change in the theme of advertising*
6. *Development of the mass market*
7. *Improvement in relations with dealers*

To answer a question of this kind it is not sufficient to sit back and examine records, work on statistics and trace trends. Investigation in the market where buying and selling takes place is necessary.

In this case particularly investigation was needed because the product has many selling difficulties. It is, for example, "revolutionary" and bears no resemblance to the familiar moth ball. A spray is used to apply it to garments, furniture and furnishings that are to be moth-proofed. It is more expensive than moth balls and the method of application tends to impress people that it is an insecticide.

The advertising manager made it his job to go out to find if all these points were being understood by the trade and the public. He conducted a shop-by-shop investigation, questioning salesmen and saleswomen, buyers and demonstrators. He listened to and questioned consumers. And out of this investigation came the fact that the product was *not being used properly*. Neither the trade nor the public understood it.

The major point was this: insufficient Larvex was used to do a good job. Dealers did not realize this. They were

mostly selling pint sizes, the smallest pack. Customers were making a pint of the fluid do the work of a gallon. They were using it as sparingly as they do an insecticide.

Obviously the first task was to teach the consumer to buy larger sizes. How to do this was thought out in terms of paint. When a retailer sells paint he does so by the area to be painted. The customer co-operates because he understands the "reason why" behind the dealer's questions. Similarly, as Larvex is used to "paint" materials, to sell it properly the salesman must find out how many suits, dresses, coats, pieces of fabric and so on the customer wants to moth-proof.

Price Revisions Met Objections From Salesmen

Demonstrators and salesmen immediately objected to this "larger size" policy on the grounds that the high price of the product made sale even of pint sizes difficult. The company, realizing the importance of the objection, undertook a revision of prices. They aimed to make the bigger sizes attractive. The gallon size, for example, was reduced from 20s. to 11s. 6d., the

half-gallon from 12s. to 7s. and the pints from 4s. to 3s.

The new sizes enabled a three-piece suit of clothes to be moth-proofed for 1s. 5d. if the customer bought a gallon size and the clothes stayed proofed for a year. At that cost great numbers of people could afford to use Larvex.

As part of the policy to raise the quantity bought a quart size pack was introduced. This sold at 4s. 9d., which meant that customers could buy an extra pint for 1s. 9d.

The success of these moves soon showed in returns. Previously the pint sizes accounted for 85 per cent of total sales. In three months after the change they made up only 55 per cent. The new quart sizes accounted for 23 per cent, the gallons and half gallons 22 per cent. In this time sale of gallons rose by 131 per cent and that of half-gallons by 92 per cent.

Such changes in the proportions indicated that the company had found a successful sales policy. The success of the quart sizes was especially encouraging. Indeed, there are reasons to hope that within a year the quarts will have completely ousted the pints.

Instructions Were Printed On New Packs

Having made progress to this extent the company pressed on with other changes. Next to be examined and analysed was the product's package. This was redesigned to bring it more into line with modern packaging trends, to make it more attractive. But the important new feature was adding information about the exact amount of Larvex to be used on a suit, three pieces of furniture or a rug. Previously customers had been merely advised to spray a fine mist on their clothes. Now they were told: "Spray Larvex generously and use at least a half-pint on a suit of clothes, at least a half-gallon on a three-piece suite of furniture and at least two gallons on a nine-by-twelve rug."

The packages were thus made to do work as well as to look decorative. The instructions lessened the danger of complaints and increased the certainty of getting customers to use the product correctly.

Next to be analysed was the advertising, which was changed completely. For years each campaign had tried to educate people to the fact that the mothworm or larva, not the moth, eats a fabric. Copy and illustrations had a scientific angle. Most of the advertising, for example, showed several mothworms eating holes in cloth, etc.

Apart from the aim to educate, it was believed that this type of advertising had enough "curiosity value" to attract attention. There was no doubt that the striking story of the larva did capture interest but it did not get at the real interest—how to prevent moth holes in materials.

Another important point concerned women. They do not, as a rule, like

(Continued on page 53)

'TAILORED' Displays Increased Sales More Than 50 Per Cent

THE policy of development of "tailored" window and showroom displays in place of the mass-produced types has been followed with success by many firms recently. When properly planned and built, tests show that expensive individual displays produce tip-top results. In some cases the volume of sales has been increased by more than 50 per cent.

This Firm Spends £30 On Single Display

A good example of the use of "tailored" displays comes from Aidas Electric, Ltd., a London firm manufacturing automatic electric water heaters. This company normally spends between £20 and £30 on a single display, sometimes a good deal more. (See illustrations of typical displays on this page.)

Some of the methods and policies used by the company might be adapted with success by other firms. Construction of displays, for example, is carried out at the factory by a department

ment, action which captures the attention of window gazers and prospective customers.

Expensive display units such as these are not, of course, built for only one retailer. They are passed round. Mostly they go to showrooms of the 150 electricity concerns who sell the company's heaters. That keeps them in constant use for some months. Indeed, the demand is such that they are booked up in advance. The firm knows they will be an active force for increasing sales in the months ahead.

When display bookings are made it is obvious that the unit must be sent out strictly to time, otherwise all dates



formed specially for the job. This is significant because it links display production very closely to factory work. It eliminates the gap between factory and sales departments which so often results in two hostile camps.

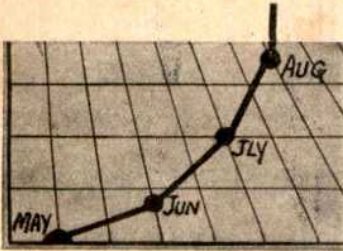
There is, for instance, no chance now for the sales executives to go ahead with display plans which do not fit in with production plans, an error which occurs in many firms. The arrangement also gives the technical staff an interest in the selling side. They are invited to criticize and offer suggestions about displays. Frequently they produce first-class ideas.

This leads to another advantage: the influence of the factory helps to make the displays different from the types normally produced by specialists in the sales and marketing fields. This influence is clearly shown in the mechanical and lighting features of the units. It introduces interesting move-

will become disorganized. This necessity of a strict time schedule was one reason why the display building department was created. Previously displays were built by an outside firm of specialists, but the time-lag, which sometimes occurs in such arrangements, made difficulties in getting displays finished to schedule.

Now, as an integral part of the organization, the department gets to work immediately executives agree on a design. Every detail of the work is in the control of the department from start to finish. And where needed, of course, the factory can supply technical advice and materials.

It is not suggested that every manufacturer would find profit in forming in the factory a special department for building expensive displays. Some products obviously do not lend themselves to this kind of policy and method. But there are thousands that do.



How SYNCHRONISED RECORDING *keeps down rising costs*



However gratifying it may be to notice a satisfactory upward trend in the sales-graph, nevertheless expansion must cause you to watch even more carefully all the ramifications of your business for any tendency towards rising overheads.

Have you ever considered how unnecessary overheads can be saved by synchronising routine-records? Records covering each phase in the completion of an order—i.e., requisitions, stock-movements, works progress, billing, warehouse-notes, deliverance-notes and so on.

By using PRIMUS Continuous Forms all the necessary instructions for the departments concerned can be produced AT ONE WRITING. Think of the time and effort saved by this method! It amounts to at least 30% and may well be considerably more according to the number of copies of records required and variety of such.



The PRIMUS attachment, as supplied by us, fits any typewriter and facilitates the smooth flow of continuous forms. It allows the machine at a moment's notice to be used for either billing or ordinary correspondence work.

You cannot increase your overheads by using PRIMUS Forms, that we guarantee. You can however effect savings and smoother routine workings, as well as eliminate all the trouble arising from inefficient recordings.

Carter-Davis Ltd

QUEEN ELIZABETH STREET · S.E.1

Telephone: HOP 0204-5-6

POLICIES and IDEAS that mean MORE SALES



Display value and convenience of handling are two big sales features of this new tennis ball pack produced for Dunlops by the Metal Box Co. An easy opening plug lid is fitted; rounded sides make the pack easy to carry. Unlike other tennis ball boxes, the decoration is on the body, a wide display area

yarn becoming entangled during use. Canadian women have quickly taken up the new idea and sales are rising rapidly.

'Grouped Selling' Idea May Double Your Sales

THE "Grouped selling" idea has been taken up in the United States by the electrical industry and is meeting with great success. Sales have been running at double the anticipated quotas.

Briefly the idea is to put electric products into "natural" groups for sales as single units. For example, one package consisting of a floor lamp, an iron, a radio set and a toaster, sells for about £5. Another package is made up with a radio set, clock and kettle. There is a considerable variation in the contents and prices of packages.

A special advertising campaign has featured the new scheme. Distribution is through the usual retailer channels.

An indication of the success of the scheme comes from Consolidated Edison company who have ordered from the factories 200,000 additional electrical appliances worth about £100,000. Other evidence of success includes increased employment in factories, higher wages and the engagement of nearly 700 extra salesmen by the leading electrical companies.

British manufacturers of electrical appliances could use a plan of this type, especially as the number of users of electricity is growing so rapidly in this country. But the scheme can be more widely used. Manufacturers of gas appliances, of household goods and of other types of consumer products could adapt the "grouped selling" principle. It is an idea worth examining.

Sales Up 17 Per Cent, Waste Eliminated When Salesmen's Reports Were Used This Way

SALESMEN'S reports are too often waste of time, labour and money because they are put to no constructive use. They are sent in by the staff to head office, glanced over by the sales executives and then filed. This is often all that happens to them. Most salesmen realize the fact and consequently resent the daily task of making out the reports.

Salesmen Use Their Own Detailed Reports

If reports are worth having, they must be worth using. One of the most successful uses is that practised by a well-known manufacturing firm in London. Their salesmen send in detailed reports on each customer. All essentials of these reports are extracted and transferred to a card file. At the end of each week all the card files of customers to be called on in the coming week are sent to the salesmen.

This means that on Monday morning each representative has an up-to-date record of all dealers he will call on during the week. He can see, by glancing at the record card, what Messrs. X ordered last time and on previous calls; special comments made previously by the dealer are there; he can deduce, from the data available, what the buyer may need to purchase on this call, etc.

Brief scanning of the card brings to mind all pertinent points about previous interviews. It arms the salesman with facts that enable him to attack his customer in the right way immediately. A more subtle touch is the flattery felt by the dealer who finds the salesman so well-informed about his views and needs.

Since the company in question took up this system sales have increased by 17 per cent, an increase which the management state is directly due to the system.

Any firm who get reports from their salesmen can adopt the idea. It is merely a logical use, a fact appreciated by the salesmen. They are more than willing to give sound, detailed reports when they know the information will be passed back to them regularly to help in getting sales. That is the experience of the firm using the system.

Once the card file is established the job of maintaining it can be carried out by an office junior. At the end of each day the salesmen return their file cards together with a report on the current call. The data is at once transferred to the cards, which are re-filed. They are then ready again for dispatch at the appropriate time to the salesmen.

Useful Package Causes a Big Rise in Sales

HERE is a sales idea from Canada which many British firms might use: The Hamilton Cotton Co. are now sheathing in transparent wrappings knitting and crochet yarns so that the wrapping remains on until the last yard is worked. The yarn pulls through a small opening in the label; there is no "sticking" even when the ball is almost exhausted.

There are several good sales points about the new packing. Dealers, for example, like it because the yarns can be handled and displayed now without soiling. Colour identification is easy. Customers, of course, are in favour of the pack because it prevents the

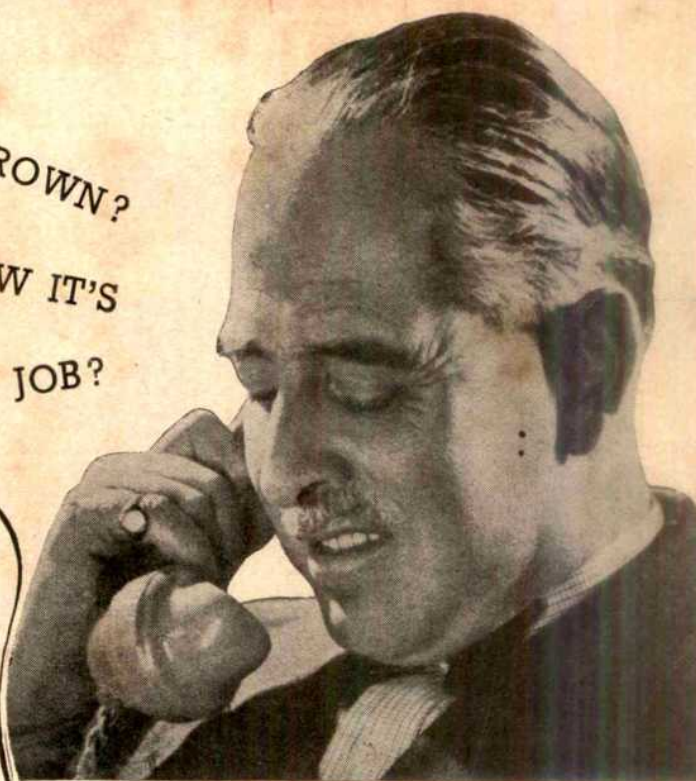
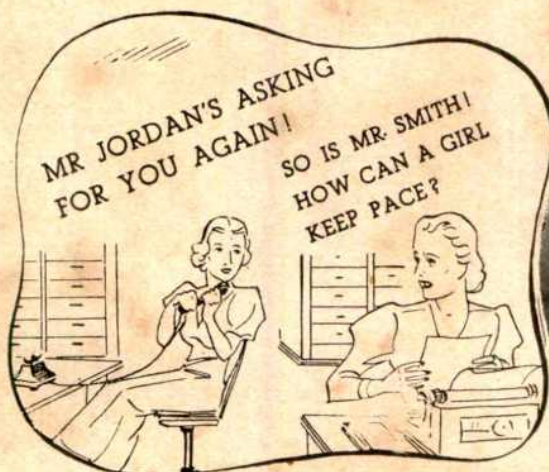
IDEAS are not hard to create; you need the *knack*, the *habit*. The habit comes from reading constructively and observing constructively. Few people really grasp an idea when they read it or see it. Yet, once grasped, intelligence can apply it in half a dozen different ways. In such a manner we got the tin-opener, the pneumatic drill, the safety-pin, and a host of other things that make life easier. They were all ideas adapted from other ideas intelligently observed.

Here's a New 'Breakdown'

IF your marketing research department is good on statistical work get them to *break down* your customers into three groups: (1) those who are broke; (2) those who break even; (3) those who get the breaks.

Armed with this information you should be able to develop a sales policy which will put you in Class (3) of such analysis.

WHERE IS MISS BROWN?
DOESN'T SHE KNOW IT'S
A RUSH JOB?



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When old-fashioned dictating methods are used a sudden rush of work is fatal to carefully planned organisation. But Ediphone Voice-Writing makes this great difference: *the dictator is independent of the presence of a typist.* Both can work in their own time, at their own speed, and without interruption or distractions. As typing is done direct from the executive's recorded voice, there is no delay in trying to decipher hurried notes. Moreover, among a number of typists, all the work can be divided evenly. Leading organisations in the country are adopting Ediphone Voice-Writing.

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Our MECHANIZED Accounting Paid For Itself Twice Over in the First Year

WE mechanized our accounting system about two and a half years ago. The equipment we sell to the business and other institutions of this country is, it will be generally acknowledged, progressive and efficient, and it was plain to us that it was inconsistent on our part to continue the use of the old pen-and-ink system of book-keeping. It was anachronistic, to say the least.

After a good deal of investigation and thought we bought a National 3,000 Class general utility accounting machine. We found that with that single machine we could handle every phase of our accounting needs.

Results have more than justified our hopes that this one machine would be capable of handling in our business at least 8,000 accounts. As it is, one operator devotes about half her time to the machine and is available for other duties for half of the day.

Now Get Money in a Month Ahead

From our point of view, the overwhelming value of having mechanized accounting is that we get our money in hand one full month ahead as compared with the old system. Every statement is in the mails early each month. As our customers are nearly all prompt in settling their accounts this provides us with a large sum of money thirty days sooner than we formerly received it. This in turn allows us to secure substantial cash discounts. I would say that this alone paid for the machine twice over in the first year we had it.

A brief account of one aspect of our method of accounting may be of interest. Our sales ledger system is simple and yet probably typical of a great many other companies in this country. All accounting for our nine provincial branches is centred at our head offices in London. The machine automatically provides duplicates, which keep our managers informed as to the state of accounts in the territory of each.

Invoices, credits, or other items relating to customers for each day's business are assembled alphabetically so that everything pertaining to an individual account is handled at one operation. The statement (to which a flimsy is attached) and the ledger card are handled at one operation. As the operator proceeds with the day's entries separate totals of all operations automatically accumulate in the machine.

A typical statement (Fig. 1) will illustrate the completeness of the information which the machine provides with a minimum of bookkeeping or effort. In the case shown the debit of £5 stood against the customer at the first of the

says L. C. DAVIS

Secretary and Chief Accountant
The Dictaphone Co. Ltd.

month, the "LA" being our symbol for head office. Had this been a credit instead of a debit it would have been printed in red by the machine. Each item is described by the machine, both for the convenience of our customers in checking their accounts and for quick reference on our part.

The first debit of £3 10s. was for an operator supplied from our London office (probably necessitated by a holiday or illness on the part of one of our customer's staff). Having carried forward the balance of £5, the machine automatically adds the £3 10s. and carries it to the balance column, the "T" meaning total for that operation.

The next debits for £65 and £3 10s. show that a machine was sold to our customer through our Manchester office and that cylinders to the value of £3 10s. went with it on the same day. The next item shows a credit for the amount outstanding at the first of the month. The machine, after the operator had inserted the debit balance, automatically reduced the outstanding balance. Finally comes a small item of 6s. 6d. supplied from our Glasgow office, making

a balance at that date of £72 6s. 6d.

On the right-hand side of the statement will be found an Account Ref., in this case "Hen." This, I think, is peculiar to ourselves and might be found useful to other firms as a check against wrong postings. Where there are a large number of accounts there is often a probability of duplicated names. By using a reference which refers only to surnames we eliminate possibility of error.

These Two Operations Are Done Simultaneously

We use the machine likewise for making out cash receipts and for making up the cash book, the two operations being performed simultaneously. Our customers pay their accounts either at our head office or at one of our branches, as suits their convenience. A carbon duplicate of the receipt is made by the machine which, after it has been used for posting to the ledger card, is sent to our branch manager, if the customer is situated in the provinces, so that he may keep his local records up to date.

To sum up I may say that we are thoroughly satisfied with this system. Three of our young women office employees are acquainted with its operation, so that there is never any delay. We have at all times a complete picture of our business, and there is scarcely any information which I cannot provide for my directors on the shortest notice.

STATEMENT

THE DICTAPHONE CO. LTD.
KINGSWAY HOUSE,
KINGSWAY, LONDON, W.C.2

MANCHESTER BRANCH: 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

TO: HENRY, SMITH & CO. LTD.,
19 CREDIT STREET,
LONDON.

ACCOUNT REF. HEN

TERMS: 10 DAYS

DATE	PARTICULARS	DEBIT	CREDIT	BALANCE
1 SEP 38	LA	3 10 0		3 10 0
1 SEP 38	LA	1 10 0		4 10 0
1 SEP 38	LA	1 10 0		5 10 0
1 SEP 38	LA	1 10 0		6 10 0
1 SEP 38	LA	1 10 0		7 10 0
1 SEP 38	LA	1 10 0		8 10 0
1 SEP 38	LA	1 10 0		9 10 0
1 SEP 38	LA	1 10 0		10 10 0
1 SEP 38	LA	1 10 0		11 10 0
1 SEP 38	LA	1 10 0		12 10 0
1 SEP 38	LA	1 10 0		13 10 0
1 SEP 38	LA	1 10 0		14 10 0
1 SEP 38	LA	1 10 0		15 10 0
1 SEP 38	LA	1 10 0		16 10 0
1 SEP 38	LA	1 10 0		17 10 0
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1 SEP 38	LA	1 10 0		19 10 0
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1 SEP 38	LA	1 10 0		26 10 0
1 SEP 38	LA	1 10 0		27 10 0
1 SEP 38	LA	1 10 0		28 10 0
1 SEP 38	LA	1 10 0		29 10 0
1 SEP 38	LA	1 10 0		30 10 0
1 SEP 38	LA	1 10 0		31 10 0
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1 SEP 38	LA	1 10 0		41 10 0
1 SEP 38	LA	1 10 0		42 10 0
1 SEP 38	LA	1 10 0		43 10 0
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1 SEP 38	LA	1 10 0		46 10 0
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1 SEP 38	LA	1 10 0		83 10 0
1 SEP 38	LA	1 10 0		84 10 0
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1 SEP 38	LA	1 10 0		86 10 0
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1 SEP 38	LA	1 10 0		92 10 0
1 SEP 38	LA	1 10 0		93 10 0
1 SEP 38	LA	1 10 0		94 10 0
1 SEP 38	LA	1 10 0		95 10 0
1 SEP 38	LA	1 10 0		96 10 0
1 SEP 38	LA	1 10 0		97 10 0
1 SEP 38	LA	1 10 0		98 10 0
1 SEP 38	LA	1 10 0		99 10 0
1 SEP 38	LA	1 10 0		100 10 0

HENRY, SMITH & CO. LTD.
19 CREDIT STREET
LONDON

Shown here are ledger card, customer's statement, and a flimsy, all of which are produced in one operation on the machine (see text)

S.P.B. Mais speaking

Do you run to catch the 8.40?

"Those who run to catch the early morning train seldom catch up with life.

"To leave everything to the last minute so that you have to bolt your breakfast, leave your wife unkissed, and your children unseen argues an ill-organized life and may quite easily lead to far worse things than chronic dyspepsia.

"Time is money. Time is health. Time is happiness. Time is everything.

"Save time and you make a fortune. That is why so many business houses regard the Remington Electric Accounting Machines as much an integral part of their equipment as the telephone.

"They increase efficiency by eliminating error and saving Time."

S.P.B. Mais



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OPERATIONS :**

INVOICING
RECEIPTS & CASH BOOKS
ANALYSIS
ADDING AND LISTING
LEDGER POSTING
CHEQUES & CASH
BOOK

WAGES SHEETS & IN-
COME TAX RECORDS
COSTING
STORES RECORDS
HIRE PURCHASE
REGISTRAR'S DEPART-
MENT WORK

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- 3. All registers visible for columnar accumulation and cross computation. All registers equipped with direct subtraction, providing contra - entries within specific column, and instant correction of errors.
- 4. Automatic tabulation and interchangeable form bars.
- 5. Complete visibility of writing line, permitting instant checking of every entry posted.
- 6. Automatic line proof of each individual entry provides instant audit.
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- 8. Uniform legibility of all records entered simultaneously.
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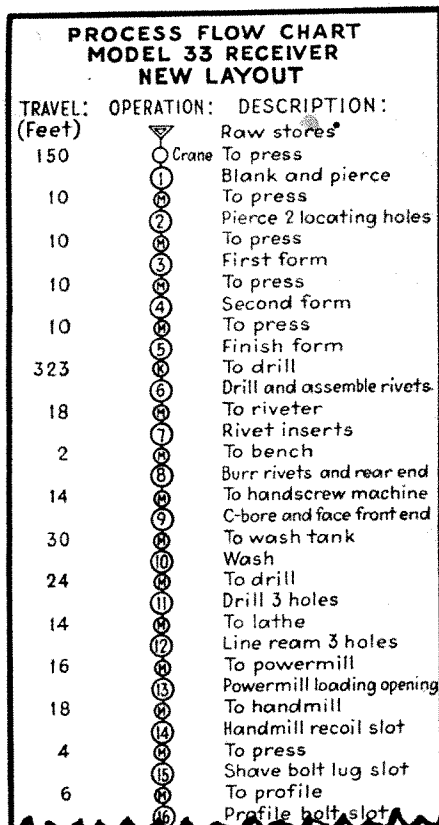
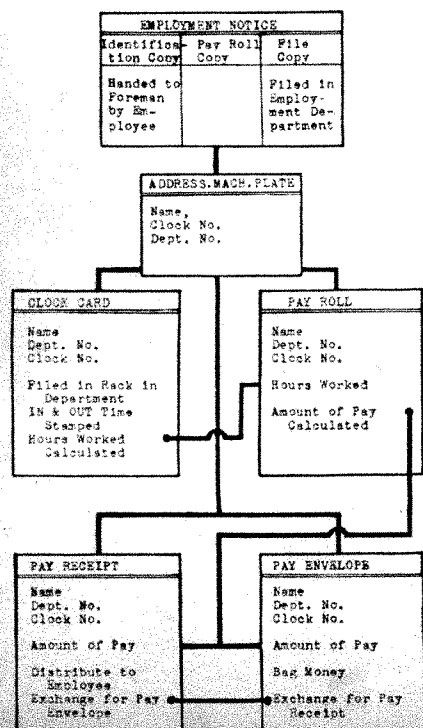
Write for full details to Dept. J.J. 807. Accounting & Adding Machine Div.
REMINGTON TYPEWRITER CO. LTD., 100 Gracechurch Street, London, E.C.3
BRANCHES IN ALL PRINCIPAL CITIES. Phone : Mansion House 3333

REMINGTON

ACCOUNTING MACHINES

THE application of scientific methods to management was undertaken first by factory engineers, and naturally the first improvements were made in the manufacturing and production techniques. In the beginning it was necessary to devise methods in order to get results, but, as experience and knowledge increased, certain tools were developed by the engineers to facilitate and speed their studies.

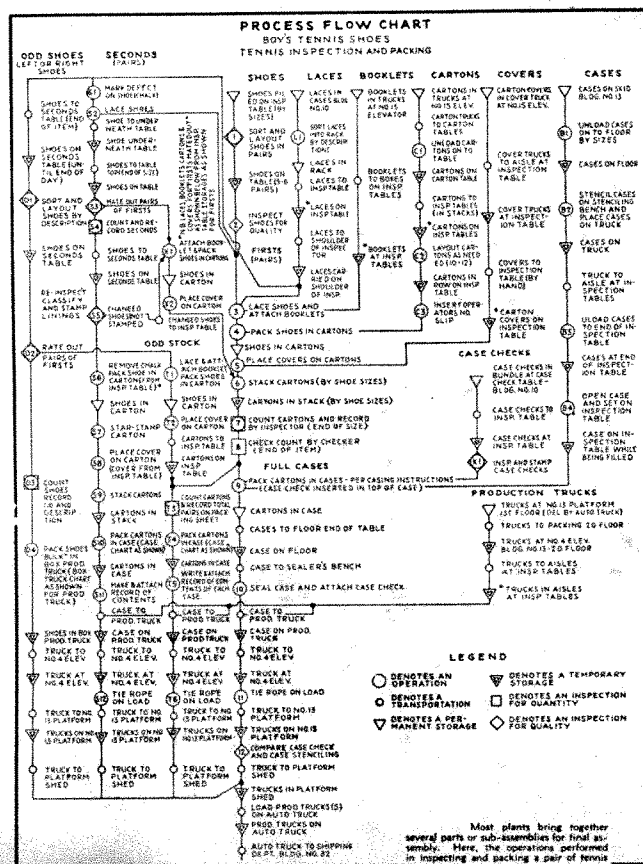
During recent years engineers have been borrowing techniques from accountants, and accountants have been adapting the engineers' tools to procedure work. Here I shall explain and



All supervisors have seen the most elementary type of flow charts which may be described as series of "boxes" connected by lines to indicate the sequence in which the actions occur. A "box" usually contains the title of a form and an outline of the action taken or the procedure followed. These simple flow charts are useful for general explanations, and one is shown in Fig. 1.

These flow charts are generally simple and clear, as shown in Fig. 2. A more complicated chart showing the processes for several parts is illustrated in Fig. 3.

In procedure work, especially when the procedures are complicated, it is necessary to follow many documents through a great number of operations and departments. One must be able to represent each form, carbon copy, record, file, and entry for all the papers passing through a department or departments. Flow charts of the type used for manufacturing analysis were tried, but they were found to be in-



The simple type of flow chart is shown for purpose of example in Fig. 1 (left). A straightforward use of symbols is illustrated in Fig. 2 (top), while Fig. 3 (above), shows a more complicated chart covering processes for several parts.



Planning the lay-out of your factory

Manufacturing processes to-day demand complete freedom in plant lay-out. To achieve this, first plan your lay-out in its logical sequence. Then design your factory around the plant, so that it functions efficiently and without restriction. Remember that a well-designed factory is very like a well-tailored suit. It exactly fits its purpose, yet permits unrestricted movement.

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building work—steel, concrete, heating, etc.—is carried out by Commercial Structures, making possible a big saving in cost and time. If you are considering moving to a new factory, or extending your existing premises, you will find CS ideas helpful. Building suggestions and estimates will gladly be submitted without obligation. Write or 'phone . . .

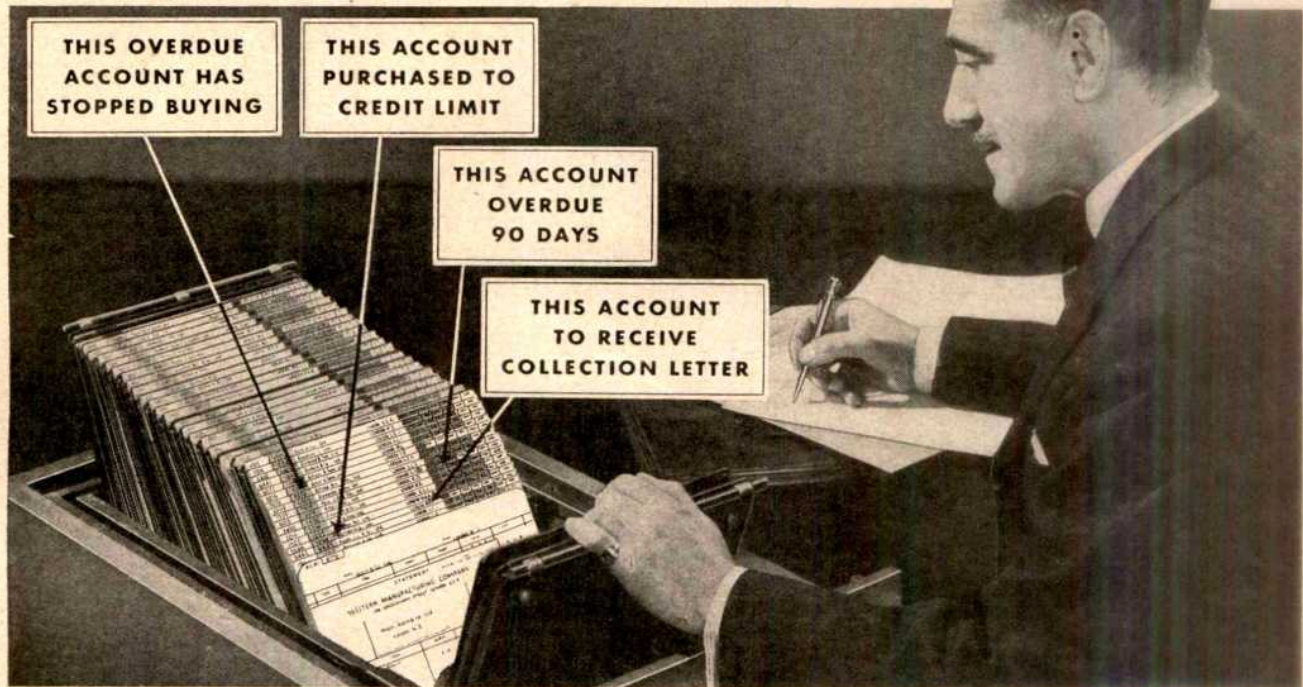


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How **BUSINESS EFFICIENCY** is being Applied to Public Administration To-day

THE purpose of this article is to call your attention to the possibility of applying to problems of government, and particularly of local government, some of the new conceptions of administration developed by the most progressive businesses over the last twenty-five years. They are called generically, for want of a better term, Scientific Management.

That does not mean that in approaching the problems of managing human beings there is a basis of knowledge comparable to that developed in the exact sciences which deal with materials. It does mean that there is a great deal more scientific knowledge available than is commonly used. The wise manager to-day not only makes use of that knowledge, but in dealing with any question his mind works along scientific lines. He relies more and more on definition, analysis, measurement, and controlled experiment—in short, on facts—rather than on opinion, tradition, and habit.

Every human being is different from every other. Therefore, all the more, every organization which involves a group of human beings, with all their idiosyncracies and complex relations, differs profoundly from every other. There are no "systems" which can be applied like a strait-jacket to every situation. For this reason management is, and will remain, an art. But like the art of medicine, it is based on contributory sciences. The good manager, like the good doctor, while he is constantly alert to the psychology of his patient, is conscious at the same time both of the exact knowledge available and of general scientific principles.

Facts, Not Opinions, Sought By Good Management

Once the government of a business, a city, or a country is regarded on these lines, a profound change in the "attack" on many questions follows. The marshalling and directing of opinions become of less moment. The measurement of facts becomes of greater importance.

Facts can, of course, be presented so as to direct opinion—hence the saying "lies, damned lies and statistics." But the use of figures in this partial way to support preconceived opinion rather than as an instrument of inquiry, simply indicates that the individual has not appreciated the scientific standpoint.

In suggesting that these principles of scientific management which have been developed in business could be applied to problems of government, whether central or local, there is no suggestion of advocating what used to be called a "business government." By this phrase was meant presumably the transfer of bankers and industrialists to fill the seats of cabinet ministers.

Nor does the suggestion that there are lessons to be derived from business imply criticism or attack on the men and women who staff our central and local public services. They constitute probably the most loyal, incorruptible and effective public administration in the world. But just because they are loyal and incorruptible, they are an extremely powerful professional group. And professional groups are prone to develop what the French call

By **L. URWICK, O.B.E., M.C., M.A.**

Chairman : *Urwick, Orr & Partners, Ltd.*

Although in this article Mr. Urwick deals with business efficiency in public administration, business executives, particularly in office management, will find it informative and helpful

New conceptions in control, developed by progressive firms, are examined by Mr. Urwick

Comparatively few firms are so advanced in control that this article cannot give their executives new ideas in management

déformation professionnelle, a rather rigid conservatism—an assumption that in respect of their profession what is, must be best.

In the third volume of his fascinating life of that great civil servant, Samuel Pepys, Arthur Bryant describes how Lord Dartmouth, the British Admiral, missed opportunity after opportunity of forestalling the landing of William of Orange: "For his part he would not struggle too much against wind and weather, but leave that to the Dutch. Their growing mad shall not provoke me to follow their example." It was the attitude of the professional—careful, unimaginative and correct, and well suited to every occasion but that desperate hour."

This, however, is a universal human tendency. It can infect a great business as disastrously and as quickly as it can affect a department of state.

Circumstances have conspired in the last half-century to make this normal human resistance to change unusually perilous from the standpoint of effective government.

If change is essential, and it often is, we must discover means of overcoming this tyranny of current practice. There is a task of social invention facing us all—a task in which public administrators and business men can each play their part.

Why Business Makes Experiments in Administration

Business in a competitive price economy is free. But it is under the perpetual threat of bankruptcy if it fails to maintain itself effectively. It has the inestimable advantage over the public services that failure to meet the requirements of the public is reflected immediately in the demand for its products and services.

Because of this freedom, business has been able to experiment with new forms of administration. And it is because, consciously or unconsciously, business has appreciated the danger of *déformation professionnelle*, and the advantages of applying new technique of administration, that the profession of Management Consultancy has come into being.

A Management Consultant is merely a man who assists the directors of a business to re-educate their staffs to the proper application of scientific management to the particular situation in that business. Such skilled advice costs money. But if the work is done properly, the expenditure on the advice is recovered many times over, because the business works with greater effectiveness and consequently at much lower cost.

Unwillingness To Change is Dangerous Now

There are special circumstances which make unwillingness to change forms of organization and administration particularly dangerous just now. Conservatism in the non-political sense: habit, routine, custom, is the balance-wheel of social life. Without it no society, no organization, could continue without disruption.

Why, then, should we strike out on the uncertain paths of change?

The tremendous advances in the physical sciences and in our control over material things, has made the task of government at every level infinitely more complex.

Not only is it more complex, but it moves, owing to modern communications, at a vastly increased tempo. Executive action must not only be more accurate and more precise; it must be much quicker than in our grandfathers' time. Desirable though deliberation may be, if we deliberate too long, a situation escapes from our control. Government has not only to deal with more people and more subjects, using the knowledge of many more kinds of specialists; it has to do all this much more quickly.

As a result, there is a grave waste of time, and time is money, at almost every level of government. It is waste which arises not from ill-will or idleness or ignorance; the individuals, as individuals, are excellent. It arises because the structure, the arrangements for co-operation between individuals, the allocation of authority and responsibility, have not been brought into line with the vastly increased requirements.

(Continued on page 47)

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Here's a machine to CUT OUT 'Lags' in Office Figure Work

THE view that a modern office is the "nerve centre" of business sums up almost graphically the idea of what an office should be and how it functions. But the term "nerve centre" also suggests that the office is a sensitive department where careful control must be exercised if it is to function efficiently.

ALL The Office Must Be Efficient

Office executives know how true this point is, particularly since most work has been mechanized. A lag in one type of work, caused by incomplete system or mechanization, which may easily waste the time and money saved by the highly efficient units in an office. Even in businesses with advanced mechanization, lapses of this kind sometimes occur.

One of the most common difficulties is in dealing with figure work. In every office there is, proportionately, a big volume of "figuring" to be done. If an office has no machine for adding and for similar jobs as compared with modern standards, it is operating uneconomically; if the department is mechanized, it is possible that additional small adding machines can be used to relieve major machines of some of their load. There are few offices where small equipment of this type would not pay for itself very quickly.

On the market there are, of course, a number of adding machines which can be used as sole or as supplementary equipment. One of these which I examined last month is the *Plus Rapid* adding machine, manufactured by Bell Punch Co., Ltd., London.

The *Plus Rapid* is a key-driven type of adding machine operated by the touch method. It is designed and built for exceptional working speed and is so simple to operate that with five minutes' practice any person of normal intelligence can work with it.

Here Are Six Specific Advantages

There are six outstanding features about the machine. They are: (1) total registration is simultaneous with actual key depression; (2) the half-keyboard enables the operator to keep her arm in a set position, movement for key operation being from the wrist only; (3) light finger control results in rapid manipulation, obviates risk of error and reduces fatigue; (4) key tops designed for touch operation; (5) no time wasted in printing individual items nor in pulling a lever or operating an electric motor bar; (6) the machine is portable.



By a

'BUSINESS' INVESTIGATOR

In many types of adding machines two movements of the hand are needed before total registration takes place. The single action of the *Plus Rapid* thus cuts in half the time taken for the operation.

Similarly, the half-keyboard is designed to give double the ordinary working speed. For instance, on a full keyboard the arm travels the distance between the figures 1 and 9 almost continuously in the addition of a column of figures. On the half-keyboard there is no need to move the arm at all. All key operation is controlled by wrist action.

Key Tops' Design Makes 'Touch' Easy

When typewriters were introduced experience showed that touch operation increased immensely the output of the typist. The same principle applies to adding machines and other equipment of this kind. Once efficiency has been obtained on the *Plus Rapid*, for example, there is no need to look at the machine during operation. The operator follows the figures in the column to be added and relies purely on touch for manipulation. The "touch" method is made easy by the design of the key tops. Odd numbers (1-3-5) are concave and even numbers (2-4) are flat in surface.

Only short practice is needed by an operator to become familiar with the feel of these key tops and to know immediately if a key is struck in error. The limited size of the keyboard and the marked difference between the odd and even keys makes it quickly possible for an office junior to operate the machine accurately and at high speed.

Another reason for the exceptional speed of the machine is that items are not printed. Experience has shown that in work of this type most firms have no

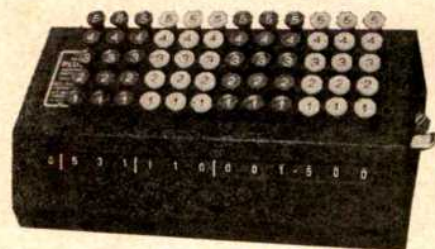
use for the printed list of items. It is usually thrown away, a complete waste. The mechanical operation of printing, therefore, has been eliminated from the machine. Totals only are shown.

Further mechanical simplification is the absence of a handle or electric motor bar. The move to operate either of these has, therefore, been eliminated. This, again, contributes to speed in working with the *Plus Rapid*. Indeed, so fast is operation on the machine that a double check of a list to be added can be carried out in less time than is required on some types of machines to make one addition.

Machine Easily Moved From Job to Job

Portability, of course, is a feature almost necessary in a machine of this kind. Apart from being moved about the office to do various jobs, there may be other work to be done in different parts of the building. Checking in stocks, for example, either by quantities or costs or by both is a job frequently performed on the machine. Departmental check-ups, inventories and so on is work in which the *Plus Rapid* can be used effectively. In fact, the machine is useful in any job in all parts of the business if there is figure work to be done. Many firms, indeed, find it worth while to keep machines "travelling" in this manner. They result in speedier and more accurate work.

The smallest model is the *Minor*, which weighs only 4 lb. 8 oz. The *Standard* model weighs 6 lb. 1 oz. and the *Major*



The Major Decimal model of the *Plus Rapid* Adding Machine (shown here) has a capacity of 9,999,999,999,999. (For range of models see text)

model 8 lb. 9 oz. All three are, therefore, portable. In each class there is a model available for sterling, farthings or currency calculations. Capacities range from £999 19s. 11d. of the *Minor* sterling model to £9,999,999,999 19s. of the *Major* sterling model.

The range mentioned is in standard production and is sufficiently extensive to cope with all currencies in the world. In addition, many other keyboard and figure wheel arrangements can be supplied to order.

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It Pays Well to Generate Your Own Electric Power

IF you use live steam for process work or for heating you should, for the economical running of your plant, know that where steam is passed through an engine, for generating power, it loses only about 8 per cent of its heat.

By passing your process steam through an engine it can therefore be made to do the double duty of providing power and of giving heat for the process. Thus, in effect, power is obtained as a by-product of the process steam.

But, you will say, a much higher steam pressure is needed to drive an engine than for process work. True, but it needs only 2 per cent to 3 per cent more heat to produce that higher pressure. For example, the total heat per lb. of steam at 200 lb. pressure is only 2.7 per cent more than at 30 lb.

An Example of Substantial Saving

Take the case of a dye works where electricity for power and lighting is purchased from the mains and where live steam is used for heating cold water in the dye-vats. By installing a steam-driven generating plant the exhaust steam is passed to a main water tank; the water is heated up and run straight into the vats as required. The extra coal to cover loss of heat units in the engine and the extra heat to obtain the higher pressure is *not more than 10 per cent of the amount originally used for heating the cold water by live steam.*

Further, as it takes at least 15 minutes to heat an average vat-full of cold water by live steam, a big saving in time is also made.

It is important to know, too, that as the modern steam engine can be designed to run without cylinder lubrication exhaust steam is then entirely free from oil and grease.

Reliability? There are cases on record where these steam engines have run day and night without a stop for three years and more.

I said that a maximum of 10 per cent extra coal is required for these combined power and heating schemes, but practice proves that actually *less* coal has been required than was formerly used for heating alone.

Here is what some works executives have said:

"This plan of combined power and heat has cut out our gas bill for gas engines: saving £1,000 a year."

"When our engine is running and supplying the whole works with steam for heat and power we use *less* coal than when taking current from the power mains and using steam only for process."

"We use more coal for heating our

Where Steam is Already Being Used for Process Work or For Heating

By P. M. WATTS, B.Sc.(Tech.)

building by direct steam on Sundays than we use for running the engines, developing over 200 h.p. and also doing the heating by exhaust on week-days."

A small, self-contained steam-driven generating set by a first-class maker is even more reliable than a public supply network exposed to human deficiencies and many dangers, such as flood, fire, lightning, snow, ice, etc. The self-contained plant is operated with easy steam pressures and voltages and has no long supply line. Any likely cause of breakdown is thus far more easily controlled.

A small steam-driven generating set is automatic in operation, load is controlled to meet requirements, working parts are automatically lubricated. It does not require an attendant to stand by, except when being started up or shut down. The cost of labour, therefore, is almost nil.

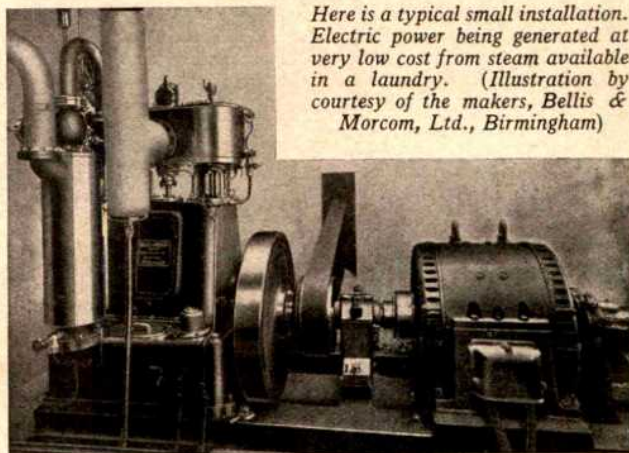
Sometimes a mechanical drive is preferred to an electrical, and this will save the loss due to double conversion from mechanical to electrical and back to mechanical power, which may amount to 30 per cent. One hundred h.p. output required from a number of small motors needs 139 h.p. from the engine shaft driving the generator. Against this, however, is to be offset the mechanical loss in shafting, but if well planned on modern

lines there is still a large margin in favour of the mechanical drive.

It can be definitely stated that where all heat from exhaust steam can be used, installation of a combined power and heating plant will show a big saving over the purchase of electricity from the mains and the use of live steam for process heating.

Figures published in *The Power and Works Engineer* for March, 1938, show that with such a scheme at Mark Fletcher & Sons, departments are charged for power at the rate of .26d. per unit.

Where only part of the exhaust steam can be used consideration of such a plant, under expert advice, is still worth while.



Here is a typical small installation. Electric power being generated at very low cost from steam available in a laundry. (Illustration by courtesy of the makers, Bellis & Morcom, Ltd., Birmingham)

'Going West' Means Going Safe Now in Factory Site Selection

THERE are now 32 factories in full productions, four others ready for occupation, and 20 being built for further tenants at the Treforest Trading Estate, South Wales. Yet two years ago light industries were almost unknown in this area where, for generations, people worked in the heavy industries of coal, iron, and shipping.

The success of new manufacturers in South Wales is a tribute to the quality of Welsh labour and a matter of first-rate importance to business executives. When work first began at Treforest, relations and friends of the men employed used to sit on the roadside and

watch the "unusual sight." Some of the men had not worked for two years or more: within a month they were operating costly plant and imported "key" men were sent home.

When the trading estate was started, critics said: "There are many unemployed, but they have only worked in the heavy industries of coal, steel, and shipping. We cannot afford to employ people in light industries who have no idea of the more intricate types of factory work."

Business men with experience of Welsh labour and independent, non-

(Continued on page 48)

A new **VIS-ALL** *announcement*

After three years' research and practical tests of "Vis-all" Visible Equipment on installations varying from 100 records to 40,000 records combined with nearly 20 years' experience of Visible Record Organisation for firms of national repute, we have now produced a method of Visible Recording in vertical form which has many outstanding features unobtainable by any other method.

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CENTRALISED Management in this Factory . . .

IT is a truism to say that business success is determined by the soundness of a firm's policies. That is generally recognized to-day. But policies, to be effective, must be put into action, and that requires control which, in turn, demands the use of selected systems and methods. To generalize, it can be said that a company's success is the measure of its ability to "get things done."

All this appears to be simple, but hundreds of firms in practice find otherwise and cannot make satisfactory progress.

Even successful concerns find they can always improve their efficiency in "getting things done." That is why examples of the organization, systems and methods of any successful company is always of interest to executives.

Policies and Practice You Might Adapt

A case in point is that of Ultra Electric, Ltd., the well-known manufacturers of radio, whose offices and factory I visited last month. Some of the policies and practices of this firm, for example, might successfully be adapted by other manufacturers.

Let us take as a start that important factor—labour. In every factory where there are seasonal peaks in production there is a certain amount of labour turnover. The problem is, of course, to regain as much of this trained labour as possible for the busy periods. *The Ultra Company get back 60 per cent of these employees.*

There are several reasons for this. One, of course, is that wages, paid on a time and bonus system, are up to normal standards. But almost as important are (a) working conditions, (b)

1. *Cuts time, material and labour training costs by recovering 60 per cent of seasonal labour turnover*
2. *By means of Planning Department keeps time-cost schedules almost 100 per cent accurate*
3. *Through material control system keeps strict check on every item of semi-manufactured and raw stocks*
4. *Through control systems all excessive costs noted and acted upon within 24 hours*

By C. E. DAY

provision of a first-class canteen, and (c) social and sports facilities.

The factory, like most up-to-date buildings of its kind, allows daylight working conditions. Every department, from machine shop to packing benches, can work in natural light summer and winter. When natural light is insufficient the artificial system of Benjamin reflectors and Edison Swan lamps is switched on and gives full illumination of every working area. Eyestrain and nervous fatigue which arise from inadequate lighting have, therefore, been eliminated.

The factory is painted throughout in light colours that have high light reflective qualities. This contributes to economy in lighting the building, an important factor in working conditions.

When the company advertises for labour special mention is made of the canteen and social facilities. The management built and presented the canteen to the staff. Hot midday meals at

nominal prices are supplied. Of a staff of nearly 700, about 500 use the canteen. Similarly, most of the employees get cups of tea at the canteen during the ten-minute rests provided in the morning and afternoons.

The canteen building is open in the evenings for billiards, boxing, other indoor games, and for dances, etc. Plays are presented by the staff dramatic society. The management encourages always the development of the community spirit in the firm.

These are the points which influence labour stability and attract the "free" labour back to the company. From the firm's viewpoint, the effect is good. It reduces the cost of training labour and leads to better co-operation between the works personnel.

Planning Department Is Key To Factory Control

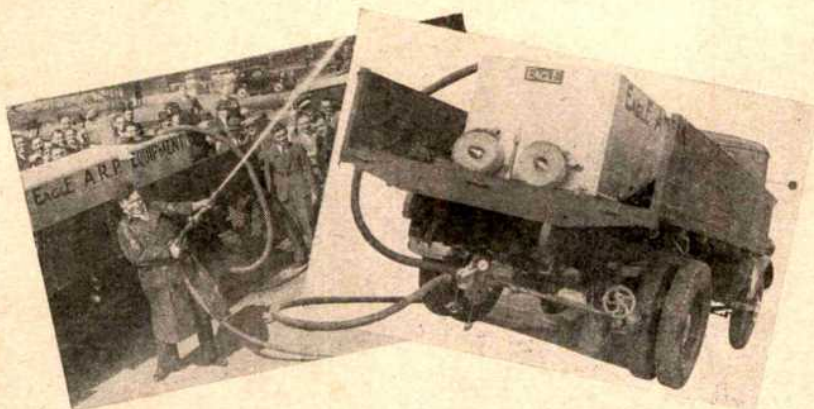
The key to the Ultra factory organization is the planning department. This is the controlling department of all production. In principle it may not differ from that of similar departments in other factories, but it exercises a much stricter control.

The department plans every phase of production, issues instructions to the factory and checks up performance. For instance, in the making of a radio set all factory sections and departments are involved. The planning department analyses every detail of the work, determines the quantities of parts needed, the number and type of operations to be performed, how each job shall be done and what shall be the standard time. An output plan for each department and section is then prepared. Each plan calls for a certain output within a specified time and is accompanied by a detailed list of materials which are to be drawn from stock by the foreman concerned.

A small point here is worth emphas-

(Continued on page 45)

Double-Purpose Truck for A.R.P.



There are many firms which could make use of this latest type of truck—a double-purpose vehicle. In ordinary times it can be kept at normal work but in a case of emergency it becomes part of the equipment for A.R.P. fire-fighting and decontamination squads



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Costs DOWN, Output UP When this Lighting System Was Installed

LOWER operating costs and an increase of over 100 per cent in lighting intensity have been attained by Hooper & Co. (Coachbuilders), Ltd., Park Royal, London, who have just installed a new system of illumination in which 125 W. H.P. mercury lamps are used. In addition, the value of production will, it is estimated, be increased by several hundred pounds a year as the result of this new efficient lighting.

Lighting Intensity Increased By 100 Per Cent

The change has been made from one hundred and eighteen 200 W. tungsten filament lamps to the same number of mercury lamps. This has given the necessary 100 per cent increase in general lighting intensity.

When the problem was first discussed it was proposed to obtain the extra light by using higher wattage filament lamps, but this would have cost about £350 for rewiring. It was then decided to install the 125 W. Sieray electric discharge lamps in the existing Benjamin dispersive reflectors by changing the lampholders to three-pin.

All the installation was carried out

A direct cash saving, 100 per cent increase in light intensity and output raised resulted from the use of this new system of illumination



by Bilton Smith, Ltd., electrical engineers, Acton, W.3.

The efficiency of the new system as compared with the old is shown in these figures, the result of tests: old installation (200 W. gas-filled lamps), 7 ft. candles under fitting, 3 ft. candles centre of four fittings; new installation (125 W. Siemens Sieray "O.H." electric discharge lamps), 14.3 ft. candles under fitting, 11 ft. candles centre of four fittings.

The old installation had a total loading of 23.6 K.W.; the new has 15.3 K.W. The current is supplied at $\frac{1}{4}$ d. per unit plus 10s. a month per K.V.A.

As the factory is working until 8 p.m. every day there is a saving of 640 K.W. per month. Savings, therefore, amount to £1 6s. 8d. plus £4 3s. on the K.V.A. charge, a total saving of £32 18s. a year. *Thus there is a direct cash saving, 100 per cent increase in lighting intensity and some hundreds of pounds' worth of extra output—all as a result of the new lighting system.*

This is the type of constructive cost cutting which many manufacturers and other business men could carry out. The case in question is a particularly good example because Hooper & Co., Ltd.,

(Continued on page 46)

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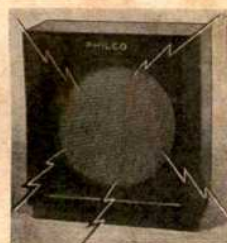
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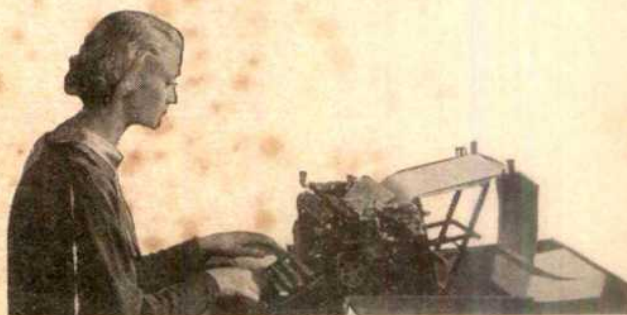
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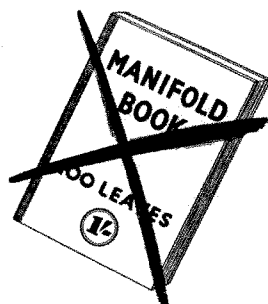
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"Loss of Profits" Insurance is a VITAL SAFEGUARD to Every Kind of Business To-day

INSURANCE against material damage by fire has, for over two centuries, been regarded by business men as a necessity. A Fire Policy, however, has its limitations. It only provides compensation for damage to buildings, plant and stock, but the loss resulting from a fire extends far beyond this.

The profit-earning power of a business is temporarily reduced after a fire, and there is also the heavy burden of overhead expenses (e.g., rent and taxes, salaries, debenture interest, and so on) which must be paid, notwithstanding the fact that business may be at a standstill.

In addition, expenses may be incurred in the renting and equipment of temporary premises, and the employment of extra labour or other means to maintain the turnover. Thus a comparatively small fire may result in a serious financial loss to a business, through reduced profits, payment of standing charges and increase in cost of working.

The remedy is "Loss of Profits" Insurance. This is not an ideal title, because the insurance covers payment of standing charges as well as actual loss of profits. It is sometimes called *Consequential Loss Insurance*.

How the Insurance Works

The sum insured is the sum of the nett profits plus standing charges for the previous financial year, and insurance is arranged to cover any period from one month up to twelve months or more following a fire. The period is selected by the firm concerned—usually after discussion with the Insurance Company's experts—in accordance with the time they think it might take the business to return to normal after a serious fire.

Cost of Insurance

The annual rates are based on (a) the ordinary Fire Insurance rates on the risk, and (b) the period of indemnity selected.

For example, the premium for one month's indemnity might be 50 per cent of the Fire Rate, for three months 75 per cent, and for five months' indemnity 100 per cent of the Fire Rate. Businesses depending on a seasonal trade (e.g., hotels in holiday resorts) should have a longer period of indemnity, the possibility of heavy loss being greater. It need scarcely be added that "Loss of Profits" Insurance is particularly advisable for such businesses and for certain others that are especially liable to be crippled by the effects of a fire.

In every business there is a more or less definite relation between (a) the annual turnover, and (b) the nett profits, coupled with the standing charges necessary for carrying on the business. The ratio varies considerably in different businesses, but the principle is always the same.

To take a simple example, the case of a small retailer making a nett profit of £500 per annum. Say the standing charges are £250, making a total of £750, and say that the annual turnover is £7,500. Thus the proportion

$$\frac{\text{nett profit} + \text{charges}}{\text{turnover}} = \frac{1}{10}$$

When a Fire Occurs

If a fire occurs and affects his business, the turnover each month after the fire (up to the limit of time covered by the insurance) is compared with the turnover in the corresponding month of the previous year. If, say, the reduction in turnover totals £1,500, the Insured's claim on the Insurance Company will be for 1/10th of this sum, i.e., £150. Expense incurred in endeavouring to maintain the turnover would also be recoverable.

Common Misconceptions

Many business men who have heard vaguely about "Loss of Profits" Insurance imagine, in the first place, that it is a luxury, secondly that it is terribly complicated and, thirdly, that it might involve disclosure of confidential details.

All these notions are incorrect. "Loss of Profits" is certainly not a "luxury" insurance; it ought to be regarded as a normal part of every business fire insurance, and in fact, a fire policy is only half an insurance if "loss of profits" is not covered as well as the material loss.

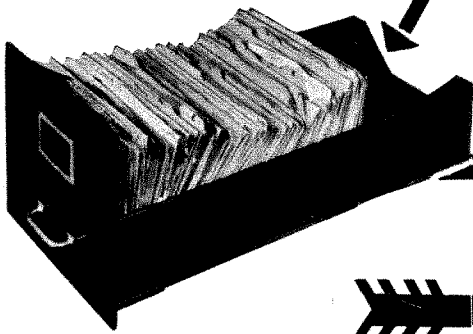
Nor is it complicated. Naturally, in the event of a loss in a large business the figures will be ascertained by a competent accountant, but the actual arrangement of the insurance is quite a simple matter, involving no elaborate calculations.

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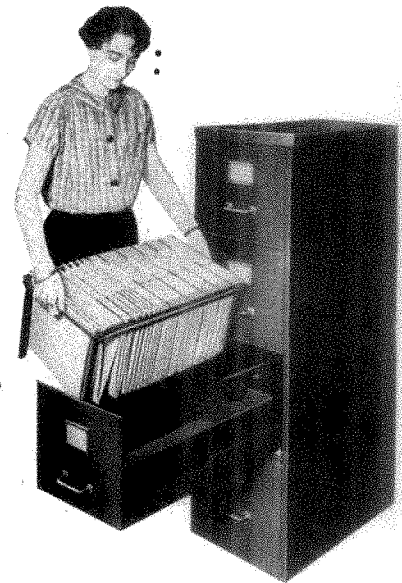
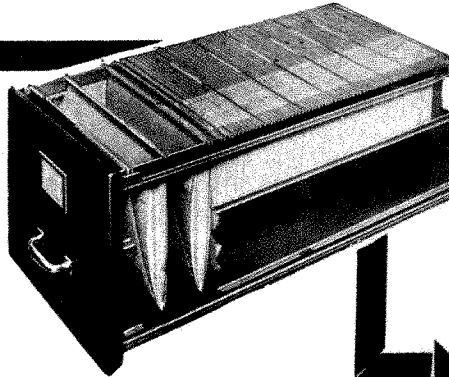


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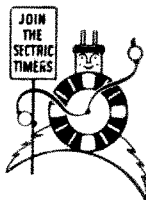
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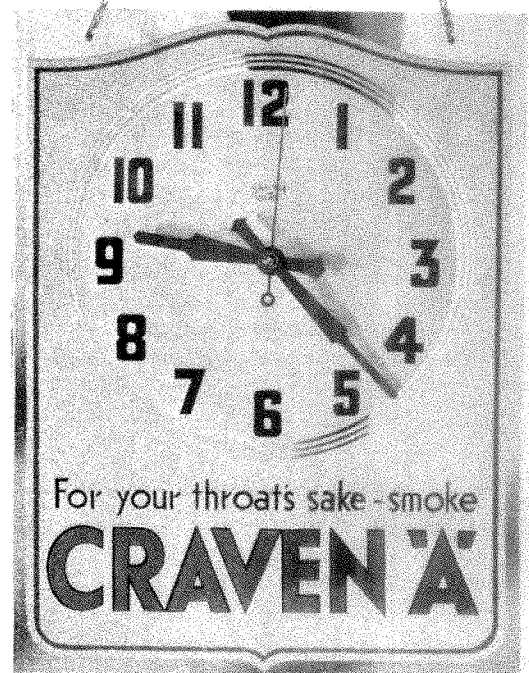
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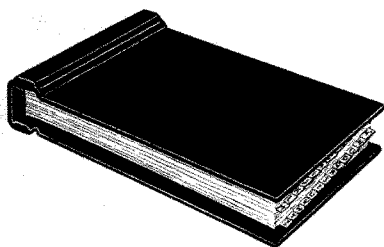
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We Want a National Register of Industrial Buildings and Plant

(Continued from page 11)

scheme they are told what service they must render, but never on any occasion is it ever suggested that there is a "best" and "most efficient" way to do the job locally.

The Government say it is no concern of theirs how it is done, as the local authority pays for the work and, therefore, should please itself as to what method it adopts. The result is that hardly any two local authorities do the job in the same way, and so it is next to impossible to produce results "up to standard" by methods which differ so widely.

In the interests of economical effectiveness the Government should lay down the method, as well as the work.

transport details is a slightly different proposition from that of plants and properties, but the business methods for obtaining and collating information regarding them are the same.

It is open to question whether the transport register would be kept locally or in the hands of the area licensing authority. It would probably be best obtained locally and the information so collected passed on to another authority. There would be strictly local needs as well as the necessity for a "pool." Much can be said for a plan whereby details of vehicles earmarked for strictly local service should be kept by the borough Engineer or his equivalent (the works and highways department preferably, as they would know all about road condi-

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z		A E I O U		1 2 3 4 5 6 7 8 9 10		1 2 3 4 5 6 7 8 9 10	
INITIAL LETTER OF OWNER'S NAME				FIRST VOWEL		MAKE OF VEHICLE	
OLDHAM CORPORATION A.R.P. TRANSPORT DEPT.							
OWNER'S NAME				GROUP NAME/NAME			
ADDRESS				ADDRESS			
MAKE OF VEHICLE		A.P. PETROL OR DIESEL		TIPPER TRAILER		TYPE OF BODY	
WEIGHT		TONS CWT		UNLADEN WEIGHT		DROP ENDS AND RIGGS	
DATE OF MANUFACTURE		REG. NO.		BODY INTERNAL MEASUREMENTS		NO. OF WHEELS	
WILL OWNER SUPPLY DRIVER		IF DRIVER ATTACHED TO ANY A.R.P. SCHEME		WILL OWNER PERMIT OTHERS TO DRIVE		IF DRIVER PERMIT OTHERS TO DRIVE	
WHERE VEHICLE KEPT		IF VEHICLE ATTACHED TO ARMY, NAVY, R.A.F. OR FOOD DISTRIBUTION		IS VEHICLE ATTACHED TO WORKING GROUP		DEPT. TO WHICH VEHICLE ALLOTTED	
IF VEHICLE ASSENT FROM DISTRICT FREQUENTLY		DATE OF FIRST EXAMINATION		LEARNED BY		DATE WHEN VEHICLE SUPPLIED BY AT OWNER OR HIRE	
WHEELS		WEIGHT		LENGTH		WIDTH	
HEIGHT		WHEELS		WEIGHT		LENGTH	
HEIGHT		WHEELS		WEIGHT		LENGTH	

An essential and important part of any emergency preparation is to see that adequate transport is available in types suitable for a variety of needs.

If we compile a National Register of personnel and buildings, in the manner previously described we should also have a fairly good idea of the number and types of vehicles required for the many special purposes in the various localities. It would seem sound judgment to accept that vehicles available in a district will be generally suitable for a large volume of the work of the district. For instance, in an industrial area there will probably be a preponderance of commercial vehicles of many types.

By previously knowing the re-distribution of types of production and of the population and by having a register of vehicles—private, commercial, public service, etc.—we will be able to meet the need whenever and wherever it arises.

The registration and co-ordination of

tions and alternative routes). Details of vehicles surplus to purely local need could be kept by the area licensing authority, who would arrange to meet the demand from the available supply.

This would facilitate regulation of supply and demand between the many localities under the jurisdiction of an area licensing office.

Surplus vehicles of any type in any area could be notified to any other area where a shortage exists for that particular type. The whole arrangement for all areas would thus be co-ordinated by one simple standardized method which would serve every purpose.

In this article I have outlined some types of rearrangement which an emergency may necessitate. I have also outlined a simple yet tried and proved method which modern business will endorse as eminently suitable for the particular requirements. *When will the Government move?*

(Continued from page 38)

sizing. You will notice that the foreman is given a list of materials to draw from stock. By this method a strict control is kept over stocks and costs. Waste is kept at a minimum, as overdrawing cannot take place. If, through breakages, mistakes, carelessness and so on more materials are needed, the foreman must put in a red requisition-sheet for the extra stock. This at once is revealed to the planning and cost control departments as "excessive costs" and, if necessary, immediate action can be taken.

Both numbers of the units to be produced and the hours to be worked are specified on each plan. Foremen must turn in daily a report of production to the planning and cost control departments. Reports are compared with the production plans and any discrepancy can be seen immediately. Every afternoon, after examining plans and reports, the head executive of the planning department calls in foremen and threshes out any problems that have arisen.

Control Ensures Fulfilment of Total Plan

This system gives full control over every phase of factory work. If a department or section is behind schedule, the fact shows up and the reason is discovered. If output is ahead of plan, it can be adjusted. For instance, workers from a section ahead of schedule can be drafted temporarily to one that is lagging to restore balance to the total plan.

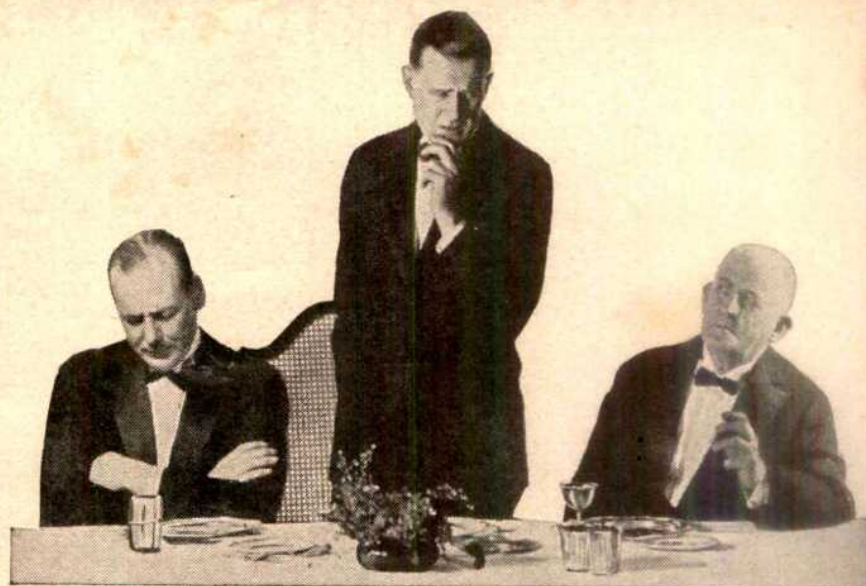
As you can appreciate, the system is flexible and allows the maximum control by the management. Not one coil can be wound over or under plan without the fact becoming known; no lags can take place without adjustment.

The outline I have given of how control is exercised is, of course, very sketchy, but the principle can be understood. There is a vast amount of detail to it which I cannot deal with here. Such factors as time-study, sub-assembly determination, methods of work, etc., are subjects themselves for full-length articles.

The main point is: if a firm is to maintain a specified ratio of profits to output, strict control of this kind is essential. Such control can be exercised in any factory, big or small, if the principle is accepted. The question then becomes that of selecting a system, and the Ultra Company's system is one practical example where complete control is maintained.

A policy of producing a high-grade product is easy to hold, but often difficult to put into practice. Big factors such as quality of material, skill of labour, rigour of tests and so on naturally get attention. The little points present the difficulties; they are often overlooked.

Ultra Electric, Ltd., for example, do not use conveyors. Why? Chiefly because they find that the "flow" system of production is better. On conveyors, especially during the "fatigue hours," there is a tendency for operators to get hurried. Some little hitch in a soldering job occurs and the worker must put on



I Thought I was Disgraced For Life . . .

It was the worst quarter of an hour I ever spent in all my life. Here was my speech, all laid out—and now, after floundering around for fifteen minutes, here I was with my whole idea lost, hardly knowing what I was saying. How I'd stayed on my feet so long I didn't know. Even while I was trying to explain the big idea, the plan I'd worked on for two years, Mr. Harwood—one of the executives of the company—had actually started dozing. Every other face at the table was the picture of boredom and disgust—with one or two sniggers ringing softly in my ears.

I didn't have the strength to stay on my feet. With a lame: "Well, gentlemen, I think that's all there is to it," I sank into my chair.

My big chance—and I'd made a mess of it! Two years work wasted, and public disgrace because I hadn't learned to express myself; hadn't learned to think on my feet! I went around for the next few days like a whipped cur, hiding from the not-very-well-concealed grins of my associates. I didn't think I was disgraced; I knew it.

A Second Chance

But then—THEN—I got a second chance. The reading of an advertisement showed me the way to quick and easy command of the priceless gift of convincing speech. I told my Departmental Manager, Mr. Phillips, all about it.

"Best idea in the world," he heartily agreed, "I'm sorry I didn't think of that for you before, myself. That's just the thing you need if you expect to get anywhere. You've got the ideas all right, but remember this—the finest idea in the world isn't worth anything unless you can clearly and forcibly express it!"

I have to laugh now, to think of the terrible time I had with my first attempt as a speaker. Because my second effort—at a conference with the executives of the firm present, where Mr. Phillips dragged me in out of kindness—was a great success. I got up, and without preparation, literally expounded my ideas easily and concisely. Afterwards on the way back to the office, Mr. Harwood asked me to walk with him.

"Isn't that the idea you were trying to explain at the dinner last month? I think there was something the matter with me that night. I didn't get the idea at all. But I'm glad you spoke up to-day—you can speak well. And as for that idea of yours—come up to my office in the morning will you?"

To make a long story short, to-day I'm managing the new department that came out of that idea of mine. In one year I've had promotions which I couldn't have expected, ordinarily, in less than twenty years. My salary is a good deal more than twice what I was earning before I made that speech at the conference.

More than that, I am called on regularly to speak at civic and business meetings and dinners.

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extra speed to get cleared ready for the next job on the belt. That often leads to a troublesome job being sent on its way not quite up to standard.

The result is that sets develop minor faults, expensive to the company in repairs and in goodwill. That is why Ultra Electric, Ltd., prefer the "flow" system minus conveyors. The rate of production can be set just as well, but the worker is allowed more scope to deal with hitches that inevitably occur.

Another small but important part of policy concerns building up a reserve pool of skilled labour. The sub-assembly sections of the factory are used for this purpose. Boys and girls are trained in these sections. They start on the most elementary and simple of assembling jobs which, when complete, are passed on to the main assembly line.

The sub-assembly system, of course is normal factory practice, but many firms do not make deliberate use of it as a training scheme. The Ultra Company keep this policy to the forefront all the time. Any youngster who shows aptitude is encouraged by being moved on to more difficult and better-paid work.

Few firms overlook the importance of "service" these days, but many allow it to become entangled in the main flow of work. The fact that a separate department is set up to deal with all service work is not enough unless that department is self-sufficient. The Ultra Company, for example, have their service department in the factory, but it is entirely independent of the production side. By drawing on its own resources it can, if necessary, construct a complete radio set. None of its activities touches upon, imposes or causes any diversion of, the normal factory work.

Organization along these lines shows that centralization of control does not mean inflexibility. Because the service section is located under the same roof as production there is no need for the two to become interlocked. But the management, obviously, can exercise a much more sensitive and direct control over all sections of the business than would be possible if they were scattered.

Lighting System Cuts Costs, Raises Output

(Continued from page 40)

have behind them 130 years' tradition in coachbuilding of the highest quality. In recent years, of course, this skill has been turned into building high-quality motor-car bodies. But the point is that any decision affecting factory equipment and conditions is taken only after serious consideration. The quality of work and the firm's reputation must be maintained in every respect. That the company decided in favour of the new lighting system and have found it a great success is evidence that should convince any firm that the system is worth investigating.

Business Efficiency

(Continued from page 32)

The effect of this is particularly marked in local government.

As long ago as 1932 the Ray Committee on local expenditure said: "We feel strongly that the time has come when a halt should be called to the legislation involving Local Authorities in fresh expenditure. They already have more than enough to do in perfecting their organization to carry out the many new duties assigned to them in recent years."

It is common knowledge that pressure of work on the central government has compelled indifference to that recommendation.

This Executive Machinery Must Be Re-Planned

It is equally common knowledge that few, if any, local authorities have settled down deliberately to recast their administrative and executive machinery to meet this added pressure. They have added new committees and sub-committees and new officials *ad hoc* to meet each new requirement as it has arisen.

A recent study of co-ordination and planning in the local authority shows that an administrative apparatus of five main committees and seven sub-committees, in addition to the Council, should be sufficient for a comprehensive grouping of functions in a local authority.

In one case, the case of a comparatively effective local authority, there are between eighty and a hundred committees and sub-committees dealing with the work of ten principal officials. This condition is general, not peculiar.

The effect of this is two-fold. None of the more efficient councillors on the many committees can possibly attend all the meetings of all the administrative bodies to which they belong. If they attempted to do so, nine members of this particular council would average 1.2 meetings per working day. Among such councillors there is an inevitable weakening of the sense of responsibility. The principal officials must willy-nilly spend a quite outrageous proportion of their time, not doing their executive job, but attending administrative discussions. This is not democracy, it is dissipation.

The difficulties of reorganizing local government in any particular instance so as to obtain a higher standard of effectiveness at a lower cost to the ratepayer are, of course, obvious.

Exact Knowledge Must Replace Individual Opinion

In the last half-century there has been immense advance in the technique of controlling the activities of large aggregations of human beings engaged in business. But this has required, as the greatest exponent of this new philosophy of administration once said: "a mental revolution" on the part of all concerned. In business, employers and men must take their eyes off the division of the surplus as the all-important matter, and together turn their attention towards increasing the size of the surplus. Both sides must recognize as essential the substitution of exact scientific investigation and knowledge for the old individual judgment or opinion in all matters relating to the work done in the establishment.

In terms of public administration, that means two things. The purely political approach—the balancing of interests and personalities, jockeying for position, and

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the other domestic varieties of "power politics" must give way to an honest attempt to secure effective government. And in devising an improved structure, careful analysis and measurement of the facts must take the place of so-called authoritative experience, which is, after all, no more than a record of the past.

It is not suggested that the task will be a popular one. Change, new ideas, are never immediately popular. But, with patience and frankness, unpopularity can be overcome—has been overcome in many businesses in this and other countries, to the great ultimate benefit of management and workers alike.

In local government, this philosophy of

administration is as yet very little appreciated. It runs counter to many cherished traditions and customary ways of doing things.

It is probable that the first considerable local authority to attempt such a reorganization of its affairs will write its name large in English history. It is improbable, however, that such a reorganization can be effected entirely from within. Councillors and executives can only be helped to approach their task from a new angle by specialized assistance from people who have made a lifetime study of these new methods of government. It is a possibility well worth the consideration of every responsible citizen.

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FIGURE 5

a. Form originated

In a set of forms, this symbol indicates the original copy.

b. Set of forms originated

This example shows an original and two copies produced at the same time (see Fig. 6-b) e.g. carbon copies.

c. Action taken at this point

d. An extension is performed

The same symbol is used for division since, in office machine operation, division is often performed by reciprocal multiplication and, consequently, on the same equipment that is used for multiplying.

e. Addition or subtraction

Since the machine operations are similar, it is often unnecessary to differentiate between additions and subtractions.

f. Checked

g. Information transferred from this form

Sloping line is on the right of basic symbol, but information may be transferred to right or left.

h. Information transferred to this form

Sloping line is on the left of basic symbol.

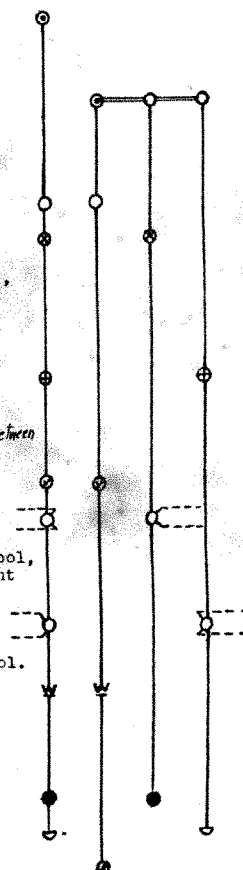
i. Waiting for further action

The line placed below the "w" provides a place to attach the impulse which causes the waiting form to move.

j. Procedure not shown in detail

k. Filed

l. Document scrapped



With a flow chart of this type constant control is maintained over documents in the files. Most offices would benefit from the introduction of a system on these lines

(Concluded from page 30)

document. Each of these horizontal broken lines must be terminated by a short line sloping to the right at one end and to the left at the other end.

Symbols May Be Used In Two Ways

Many (too many) forms eventually get into file and this is indicated by a half circle, Fig. 5-k, which represents a file basket to those who have good imaginations. This symbol has been used two ways. Originally, a half circle whether right-side-up or upside-down represented a document filed, but in charting procedures where a great many items are removed from file as well as filed, the upside-down half circle may represent items removed from file.

Develop Hieroglyphics To Suit Your Own Needs

While the diagram shows the more important and common symbols, others have been accepted and are in constant use. Flow chart symbols are not stereotyped and standardized as drafting conventions are; so do not be afraid of developing hieroglyphics which will suit your needs.

'Going West' Means Going Safe Now

(Continued from page 36)

Welsh industrial experts disagreed. Among these was Mr. Seebohm Rowntree, industrialist and philanthropist, one of Lord Nuffield's trustees for his £2,000,000 Special Areas Fund. Mr. Rowntree said: "I was impressed by the quality of the unemployed men and by their reasonableness, intelligence, and knowledge. They are the type of men I would employ in my own factory."

This opinion has been endorsed by manufacturers on the estate. There are no dissentients about the adaptability and intelligence of the labour. In one factory, for example, where a new process used requires an exceptional standard of efficiency in the workpeople, the managing director said recently: "The men are a fine lot—loyal, keen, intelligent, and remarkably quick to learn. And, once learnt, a thing is never forgotten."

Many firms now use a "teach and promote" system, another indication of the high quality of local labour. These companies find that once the "rhythm" of factory life has been acquired, workpeople proceed to more intricate work almost as a matter of honour. Few fail

to get rises in wages after being in factory work a few months. Employers are also giving unskilled workers a chance to learn semi-skilled occupation in the firm's time as soon as the staff become accustomed to factory life, a policy which is yielding very satisfactory results.

International tension has had a favourable influence on the recent development of Treforest. The September crisis, for instance, attracted attention to the strategic advantages of factory location in South Wales. "Going west" is, for light industries, a phrase now which implies security rather than extinction.

With war conditions in mind, the estate has some unique advantages. It is remote from likely sources of attack. But it is an industrial centre with direct access by road, rail, air, and canal to the big markets of Britain and the world. And there are available, of course, all the services needed by a modern manufacturer.

An important proposed development in the area is that affecting Pembroke Dock. This is likely to become a vital civil air base for western ocean traffic, thus adding considerably to the already extensive transport facilities of the area.

Looking for new TERRITORIES?

Here's One Worth Investigating

ONE of the problems of every successful manufacturer at some time or another is to decide when effort to gain further sales in a market is uneconomic: to decide when it is better to turn to new or undeveloped markets than try to wring the final drop of juice from the already well-conquered territories.

But many manufacturers fail to realize this fact and shirk the responsibility of launching into fresh spheres.

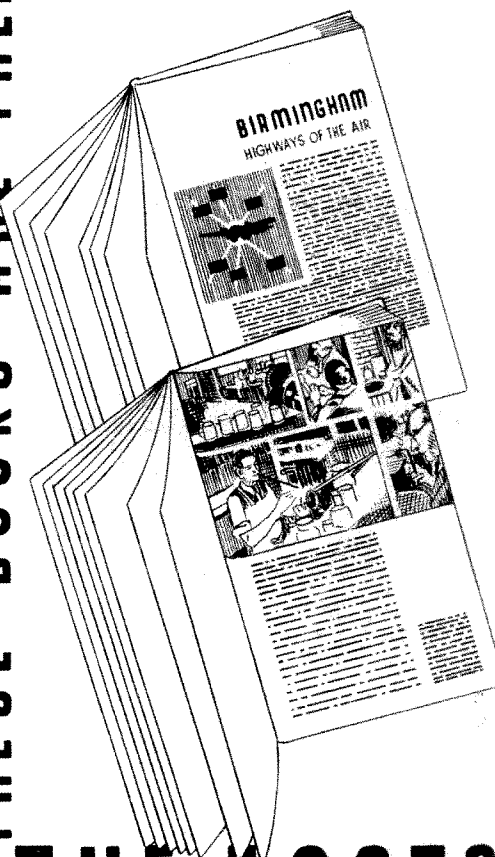
Revitalized Irish Market Can Be Developed

For those, however, who are enterprising there is an excellent opportunity to-day to develop a "new" market—Ireland. Even if sales expansion can proceed uninterruptedly in established markets here there is no reason why the revitalized Irish market should not be entered and developed concurrently.

What are the facts about the "new" Ireland? Here are some which should

INDUSTRY AN IMPRESSION

THESE BOOKS ARE FREE

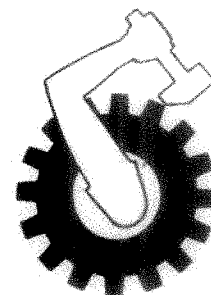


Within the covers of these booklets Birmingham seeks to condense an impression of its 1,200 trades and the thousands of types of its manufactures. See England's Second City with its coat off and making the products it sends to every part of the world.

THE FACTS

And besides being England's greatest industrial centre, Birmingham is a noble city and the home of the Chamberlain tradition of civic progress. The manufacturer with his factory in Birmingham shares its prestige and is in the centre of industrial progress. There are publications, free for the asking, to be obtained from the City of Birmingham Information Bureau, The Council House, Birmingham, 1. Information also obtainable through the Travel and Industrial Development Association of Great Britain and Ireland, 29 Cockspur Street, London, S.W.1; British Empire Building, Rockefeller Center, New York; 28 Avenue des Champs Elysées, Paris.

BIRMINGHAM



MASSON SEELEY & CO. LTD.

have one or two openings for speciality salesmen, not over 35, of professional outlook and standards. Some knowledge of printing, advertising, sales-promotion helpful. Salary £7 per week during thorough and progressive training period; draw on generous lines against commission and contribution to expenses later. Own car essential. It is suggested that applicants should regard this opportunity as opening up a career, not as just another selling job.—Please apply by letter in the first instance to MASSON SEELEY & CO. LTD. 14 HOWICK PLACE, S.W.1

Advertising Ideas

You'll get BETTER publicity with your next advertisement, folder, booklet or sales-letter, if designed and written by

MORTON SERVICE

281, High Holborn, London, W.C.1. HOLBORN 4216

INSURE WITH
The LONDON & LANCASHIRE Insurance Co. Ltd
CHIEF ADMINISTRATION
7 CHANCERY LANE, LONDON, W.C.2

EFFICIENCY IS CUT IN HALF IF OLD DRAUGHTIES ON YOUR STAFF



Working efficiency drops with the temperature; chill air destroys concentration and sometimes leads even to this:

"Saying that it was too cold to work, 50 men in the jig and tool drawing office at the factory in Birmingham stopped." ("Daily Herald," 20th December, 1938.)

BANISH HIM WITH

THERMOVENT

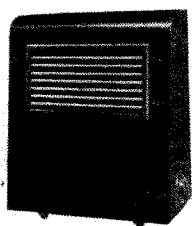
ELECTRIC CONVECTION HEATING

THERMOVENT is the new form of heating, warming the air, by convection, to give evenly distributed heat at all levels and at all distances from the heater. Built-in thermostat control, affected only by air-temperature, keeps the atmosphere at a healthy, constant level of warmth, in addition to saving current. Initial and upkeep costs are very low and various types are available to suit all working conditions. Ideal as main or subsidiary heating, for constant or occasional use. Send for full details to:—

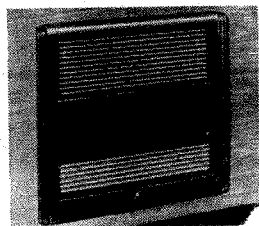
THERMOVENT HEATING, Dept. BS.3

E. K. Cole, Ltd., Southend-on-Sea

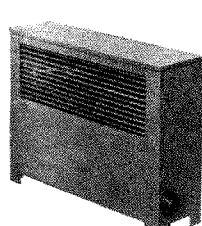
MAXIMUM EFFICIENCY AT MINIMUM RUNNING COSTS



PORTABLE



INSET



STEEL CASED

USE THIS COUPON

If you desire information from the Editor or from Advertisers attach this coupon which should be signed by a responsible executive, to your business letterhead and post to:—

BUSINESS Service Department, Whitefriars House, Tallis Street, E.C.4.
Please send, without obligation, more information in connection with advertisement (or advertisements) in the March 1939 issue of BUSINESS numbered below.

Numbers (see Index, page 5).....

Firm

Address

be helpful to manufacturers who are planning to market goods there. Ireland (exclusive of Northern Ireland) has a population of 3,000,000. Foreign trade (1937) totalled about £70,000,000 of which British imports accounted for over £21,000,000 out of total imports worth over £44,000,000. Total exports were worth about £22,240,000. Of this figure, Britain took about £18,000,000.

Since the new Trade Agreement, many British firms have already re-entered the Irish market. Leading British biscuit manufacturers, for instance, enjoy fair distribution of their products despite the fact that no advertising has yet been initiated.

The majority of retailers have little hesitancy in restocking British products previously well known in Ireland. This friendly attitude is not incompatible with their readiness to stock and push Irish-made lines.

The retailer mind in Ireland is very flexible and realist in such matters. Given anything like a reasonable degree of selling effort on the part of a British house, he will generally give more than a good show to the acceptable imported article.

The British manufacturer who is seriously interested in wooing the Irish market will not base his plans too rigidly on foibles of any exclusive groups in the community. He will aim at goodwill of the mass.

For British toilet, medicinal, food-stuff, fabric, etc., products there is in Ireland a marked consumer partiality. This goodwill must be credited, in large part, to attractive, persistent and intensive sales propaganda of earlier years, resulting in building up consumer familiarity and acceptance of such products.

First-hand market investigation is more than ever the primary necessity in the Irish territory. It need not be expensive but it should be handled with care so as to avoid mere collection of data. Market study will disclose where competitors' strength lies.

Dealer co-operation is particularly vital, and character of the advertising must be given most careful thought. British and Irish markets are constitutionally and temperamentally different and call for individual and distinctive treatment.

VENUS PENCILS

VENUS PENCILS are incomparably smooth and longlasting, their standard of quality never varies.

MADE IN ENGLAND
KNOWN THROUGHOUT THE WORLD

If you will state the nature of your work and choose two different grades which you think most likely to suit, we shall be very glad to send you samples to try.

VENUS PENCIL Co. Ltd., LONDON, E.C.5

From 6b
softest, to
9h, hardest

Sales Go UP Through New Packs

BREAK-AWAY from traditions in packaging usually pays well if the new scheme is carefully thought out; but if the new pack is simply a "forced" difference, results may not justify the time, labour and cost involved.

A new style of packing must be better than the old from at least two points of view: (a) utility and (b) appearance. It may also have a third factor in its favour—a lower cost of production.

There are several notable examples recently of packs breaking with tradition. Two of the most interesting concern flour and animal foods.

In the past flour has been marketed in paper bags or similar packs. Bags have limited utility value, are easily damaged and are of negligible use for display purposes.

Realizing that a chance existed to get a big sales step-up by the innovation, a firm of flour millers not long ago changed radically their flour packs. Now they use a cardboard drum pack with simple, clear scarlet lettering on white ground. Top and bottom caps of the drum are yellow.

More Displays and Sales, Lower Costs

As a result of this pack the flour now gets good displays in retailers' windows, on counters and shelves. Sales have gone up; packing costs have come down.

Packs used for animal foods have generally been bags or rough types of cartons. A London firm of animal food manufacturers, however, have recently broken right away from this tradition. Not only have they introduced a carefully designed series of packs, well printed in several colours, but they have wrapped them in Cellophane.

This has lifted their products into special prominence. The packs have good display value and accordingly get more than their share of show in retailers' shops. But, better still, the company have been able to get the product into chemist's shops. This opens up a new selling outlet, as hitherto chemists have not been willing to display—even if they stocked—animal foods.

In this instance the dividends on the break with traditions have been about 300 per cent in three months, and sales are still climbing rapidly.

The two examples quoted merely give an idea as to what can be done in package re-designing. There are probably many scores of manufacturers who could re-package their products with similar success. It is the job of the marketing executive to review the packs of all his firm's products from time to time. For packs, as with other business machines, equipment and materials, can outlive their usefulness.



AN ASSET in your CAPITAL ACCOUNT

In these days of fierce competition no business or industrial undertaking can afford to neglect any factor which might contribute towards its ultimate success.

Every available asset *must* be capitalized—and an advantageous factory location is of such importance that it must rank high in any list of assets.

An unbiased examination of Lancashire's industrial record cannot fail to convince you of the area's inherent ability to cater successfully for the ever changing needs of modern industry.

Since 1931 more than 600 new industrial establishments and 200 factory extensions have been started in Lancashire. There are now

2,500 more non-textile factories, while over 200 redundant textile mills have been converted into factories for an amazing range of products. Employment for more than 25,000 work-people is being provided by enterprises introduced by the Lancashire Industrial Development Council. These facts indicate that Lancashire is as much a vital force in the country's economic life now as it ever was in the days of the industrial revolution. It is a force which must strengthen the hands of all those associated with it.



Inquiries for information and expert advice on available factory locations are welcomed and treated in strict confidence.

J. BENNETT STOREY, General Manager,
**LANCASHIRE
INDUSTRIAL DEVELOPMENT COUNCIL**
SHIP CANAL HOUSE, KING STREET, MANCHESTER, 2

Preliminary information obtainable through:—

THE TRAVEL AND INDUSTRIAL DEVELOPMENT ASSOCIATION OF GREAT BRITAIN AND IRELAND, 29 Cockspur Street, London, S.W.1, British Empire Building, Rockefeller Center, New York, and 28 Avenue des Champs Elysées, Paris.

Send for
**BEATTIE'S
BULLETIN**
of
A·R·P and
FACTORY ACT
EQUIPMENT

S. N. Beattie & Co. Ltd., Safety House
11, TUDOR WAY, SOUTHGATE, N.14.
(Palmer's Green 6323)

FIRE!

Even a modest conflagration in your premises could cause incalculable damage if your more vital records were harmed. Your premises and stock are of course insured, but no insurance could repay the years of effort represented by your ledgers, sales records, minute books and the like. **FIRE-PROOFED CABINETS** can take care of these at a very moderate cost, however, representing possibly less than just one year's premium on less valuable possessions.

Prices from 87/6.

Full price list on application.

H. TAYLOR & SON (London) Ltd.
28 Holborn Viaduct, London, E.C.1.
Phone: Central 2987

Sorting Occupies A Key Position in Modern Office Routine



This chart shows the important part played by sorting in any business and reveals the amount of time spent in doing this work.

By the use of AMBIDEX SORTERS the time spent on sorting can be halved and the flow of work throughout the whole office speeded up. Furthermore, any letter or document required for reference is instantly accessible, and the possibility of losing business through delay in answering queries is removed.

AMBIDEX SORTERS are in general daily use in the offices of financial concerns, chain-stores, department-stores, mail-order firms, public utility companies, and commercial and industrial organisations throughout the country.

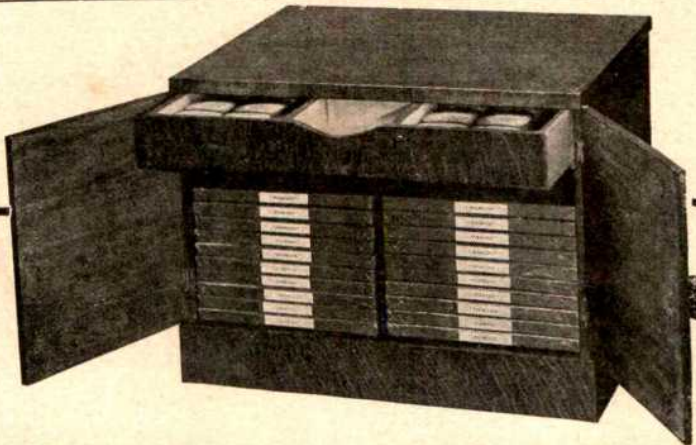
Let us send you our booklet describing a range of models capable of dealing with any kind of sorting and any volume of papers.

Patentees and Manufacturers

AMBIDEX Equipment Company

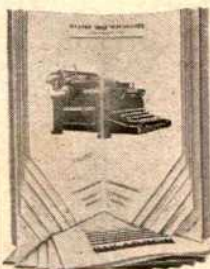
44 St. Paul's Churchyard, London, E.C.4

Agents in Canada, South Africa and Norway



THIS CABINET IS MORE THAN A CABINET..... IT IS

WRITE FOR THIS NEW BOOKLET



1. Do you want more and better results from your typewriters?
2. Do you want carbon copies to cost less?
3. Do you want clearer carbon copies than you are getting?
4. Do you want out-going letters to look more technically perfect?
5. Do you want to get back the equivalent of 25% on your used ribbon spools?

THIS INDEXED BOOKLET TELLS YOU HOW

CABINET..... IT IS

AN ORGANIZER. AMONG OTHER THINGS IT SOLVES ONE OF THE MOST TROUBLESOME TYPEWRITER PROBLEMS. IT ENSURES THE RIGHT TYPEWRITER RIBBON FOR THE TYPIST, THE TYPEWRITER AND THE JOB. IT LEADS DIRECTLY TO AN IMPROVEMENT IN THE STANDARD OF TYPEWRITING.

★ THE CABINET IS PRESENTED FREE of all cost on an initial order for RIKARBON typewriter ribbons and carbon papers which are of dependable quality and competitive in price. Write for full particulars and booklet as illustrated.

RIKARBON LTD. • 28, VICTORIA ST., S.W.1, • ABBy 1488

We CAN Build Up Our Export Trade

(Continued from page 10)

and bad debts. The D.O.T. can provide that information. It issues economic surveys of every market. It also prepares reports on changes in prospects of business, usually due to five main causes: (1) financial or banking changes; (2) customs tariffs changes; (3) good or bad crops; (4) business and industrial developments; (5) fluctuation in foreign competition.

Three-Point Survey For Your Product

Such information plays a vital part in helping you keep policies, prices and commitments right. You are able to know the trend of any market in general and in particular.

Let us suppose for a moment that you find that the general reports have no special value because of your particular product. The Department has an answer for that. It produces studies of "Markets for particular commodities." These studies cover: (1) investigation to find out how to expand an already well-developed market; (2) collection of facts to reveal the cause of declining trade in any country and how to regain the lost business; (3) getting information of all kinds to show how manufacturers of specific products can develop business in undeveloped markets.

This is a valuable service and could be used by most firms. For instance, a company selling a household product in the Far East not long ago were puzzled to find that their trade dropped to a fraction of its former volume. The D.O.T. investigated and reported that a foreign rival had introduced a new line with a special non-drip arrangement. The British firm quickly made an improvement on its rival's innovation and won back the business.

All the world knows to-day about the British Industries Fair, organized by the exhibition section of the D.O.T., but

Leabank Chairs preserve the natural upright posture that is healthiest and therefore most efficient for workers of both sexes. Models include low-priced factory series.



LEABANK CHAIRS
MANY FACTORY AND OFFICE MODELS
Write for free list.
LEABANK CHAIRS LTD.
13 Imperial Buildings,
56 Kingsway, London, W.C.2

how many British business men realize that this is only one part of the Department's activity in this respect? If, for example, you want to organize a private exhibition in a foreign country, the Department will co-operate with you. It can smooth your path in a hundred ways and lend its powerful aid in many sources that are unreachable by private firms.

These are a few of the services given by the D.O.T. Any British firm can have them for the asking. Certainly they are of vital importance to any company which is in or is entering export trade, and the more firms that use the Department's services the better those services will be.

Market Research Put Sales up 53 %

(Continued from page 22)

illustrations of such things as worms. Nor are they good readers of copy about scientific matters. Yet women are the chief potential buyers of Larvex.

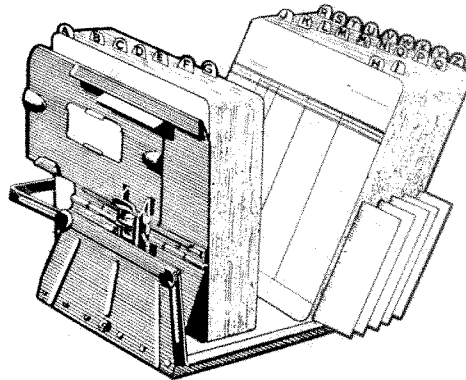
The new policy decided upon was to show what the product would do for the customer and to appeal in particular to the interest of women. For example, women are interested in Paris fashions and fine clothes, therefore a tie-up was made with well-known film stars. Copy with a testimonial theme was used. There was not, however, special emphasis placed on testimonials. For instance, a typical statement was: "Janet Gaynor's beautiful wardrobe protected from moths at Selznick International Studio by Larvex. Your clothes are just as important to you. Now get rid of moth damage as movie stars do. Moth-proof with Larvex to-day."

These Film Star Testimonials Paid Well

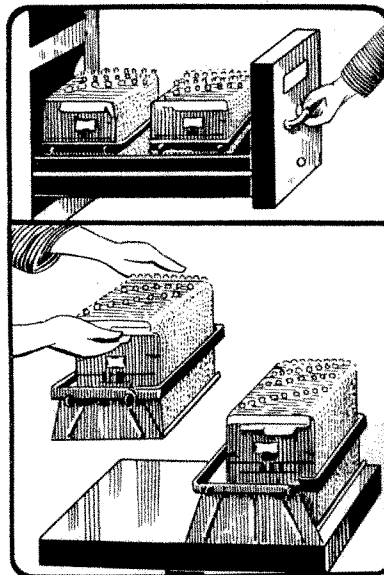
Although it is thought by many marketing men that film star testimonial advertising is foolish and unproductive, Larvex is another proof that the reverse can be true. Results from the campaigns were very good. Indeed, the appeal overcame one of the major difficulties—that of getting people to use

(Continued on page 55)

YOU HAVEN'T SEEN THIS *Before!*



THE NEW *Twinlock* "PRESTO" ADJUSTABLE MACHINE ACCOUNTING LIGHTWEIGHT TRAY



THE "Presto" machine Posting Tray combines every worthwhile feature. It can be easily lifted from a safe storage unit and presented conveniently to the machine operator. It will be seen that the extensible side arms will drop down below the base of the tray, which will allow the posting media to be easily inserted—a very important feature and has a direct bearing on the speed of the operator.

These adjustable arms will also allow the accommodation of varying widths of Ledger Cards which can be "offset" to the left or right.

It is remarkably strong yet only weighs 4 lb. 7 oz.

PERCY JONES (*Twinlock*) LTD.

CHANSITOR HOUSE, CHANCERY LANE, W.C.2

Telephone: CHANCERY 8971 (4 lines)

PAYING WAGES CASH



Nearly every firm that has installed the "ONE KEY" METHOD during the past two years had previously doubted that the BRANDT would be useful to them.

They discovered that it COSTS LESS than its REAL WORTH, to save errors, effort and time.

THINK a little more deeply about this YOURSELF; we give you every facility to do so. If you like you may hire equipment for three months but, anyway, DO DISCOVER THE FACTS.

★ Without obligation, write for a copy of the booklet "A Paying Concern," which tells how the Brandt reduces the cost of Wages Paying.

BRANDT AUTOMATIC CASHIER CO. LTD.

41 FURNIVAL STREET

LONDON

E.C.4



*correct
seating
relieves
monotony*

Let the scientifically positioned backrest of EVERTAUT Works Seating take the strain of a day's work and not your workers. Send for full details of our complete range of over twenty models

install **EVERTAUT** steel
WORKS SEATING

● SEND FOR FULL DETAILS TO:
EVERTAUT LIMITED (Dept. B)
WALSALL RD., PERRY BARR, B'HAM. 22

**We
can supply you
with words and
eye-catching
designs**

It is well-known that those who make use of the printed word to make their wares known are those who reap the biggest rewards in industry. And good printing helps to reap bigger awards.

We can do more than give you good printing. We can supply you with words and eye-catching designs.

Take a leap in the right direction now by asking us for a practical demonstration of our unbounded ability to help you.

WM. DRESSER & SONS
LIMITED
Publicity Printers
CROWN STREET, DARLINGTON
Write or phone 2125

FLEXIBLE Systems are Needed For Finger-Tip Control

SYSTEMATIC arrangement of information and accounts is necessary in every business. Many failures may be attributed to neglect in recording facts and figures for comparison and as a basis upon which to determine future policy.

When a new record is contemplated regard should be paid to possible expansion. The medium chosen should be capable of extension without rewriting and rearrangement, easy of operation, and should not involve duplication of work.

Loose-Leaf Book System Meets Needs

There is to-day a system of loose-leaf books designed to fill these requirements. The component parts of the equipment are:

- (1) Covers with patent mechanism, permitting the immediate insertion or removal of sheets.
- (2) Sheets ruled and printed for recording information or figures.
- (3) Index sheets with projecting tabs for self-indexing the record sheets.

The value of the system lies in the fact that any sheet can be inserted in, or removed from, the cover without disturbing the existing arrangement of any other. By this means, all current sheets pertaining to a particular record can be kept together, new ones added as needs arise, and old sheets transferred

Forms Can Be Arranged In Any Manner

Indexing of records is easy because sheets can be filed immediately behind index sheets bearing projecting tabs which indicate classification. For instance, all "A" sheets are placed behind "A" index sheet, and all "B" sheets behind "B" index sheet, thus a separate index to any record is unnecessary, all sheets being self-indexed. The forms can be arranged in any manner desired—alphabetically, geographically, by subject, etc. A number of different records may be kept under one cover, separated by index sheets.

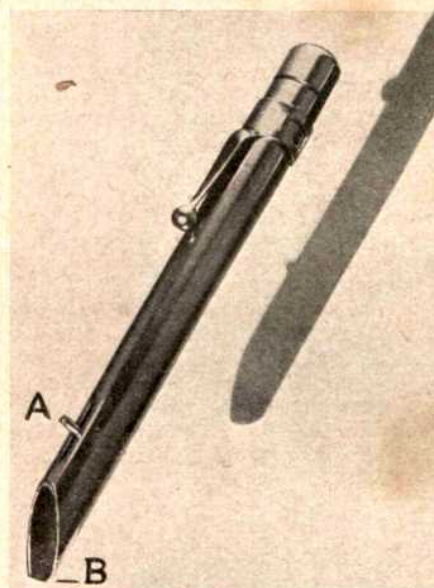
When these methods are applied to orders and invoicing, any number of copies can be made at one writing, and the different sheets sent to the departments concerned. For instance, invoice, day-book copy, dispatch order and departmental orders can be written at one operation, the orders distributed for attention, and the completed records filed in binders under any arrangement desired.

Every Executive Should Have This Book

The range of loose-leaf equipment available covers all the needs in office record and book-keeping work. This can

be appreciated after a glance through the new general catalogue on loose-leaf equipment and methods, etc., just issued by Moore's Modern Methods, Ltd. Every office executive should have this catalogue on his desk. It is more than a catalogue; it is a guide to modern office systems, methods, and equipment.

POCKET GADGET FOR EXECUTIVES



This pocket microscope is useful for detailed examination of fabrics, etc., for textures, imperfections, and so on. Point "A" is used to focus the lens. Point "B" illustrates that in use the cut-away of the microscope must face the light

Australian Device to Check Telephone Calls

THE end of Australian subscribers' disputes with their Post Office, over the quarter's telephone calls, is foreshadowed by the invention of an ingenious device to check the number of all calls in the office or house from which they originate. Mr. C. V. L. Mitchell, of Brisbane, is the inventor of the device, which fits over the telephone dial, and which records all calls on a tape inside the mechanism. The tape can be unlocked and removed each day. The dial cannot be tampered with when the device is fitted and locked, and for this reason, Mr. Mitchell claims that it will enable employers to reduce telephone costs by checking unauthorized calls made by their staffs.

(Continued from page 53)

Larvex on delicate clothes. Women do not willingly believe that there is no danger in spraying a liquid on their best dresses, but when they read about film stars using it on expensive clothing sales resistance on this point is lessened.

Similarly, association with smartly dressed film stars linked up "Larvex protection" for all kinds of fashionable clothes. The association helped to get general acceptance.

Two-Fold Policy Behind Window Displays

Part of advertising money was devoted, of course, to window displays. In these the aim was two-fold (a) to make prominent the fashion and delicate clothes point, and (b) to feature the method of using the product and the prices. For example, one successful display was a big cut-out of Janet Gaynor as shown in the Press advertising, together with similar copy, plus additional display units featuring the use and price angles.

At this stage of development the company began to realize another policy, that of getting into the mass market. Following price reductions and all the other changes described, the firm's executives took the view that mass sales were within reach.

Previously the high price of the product narrowed sales to a select market that restricted use of advertising and displays. Now, however, there are forty-five magazines and newspapers in which space is used consistently. And that headway is being made in the mass market is shown by the 56 per cent increase in total sales.

Displays are more widely used to-day because of wholehearted retailer co-operation. Encouraged by the scope of the changes made and by the fact that Larvex now sells readily and in larger units, dealers are willing to give the product plenty of show space.

Selling Price and Profit Were Fixed

Particular attention was paid to relationship with retailers, especially in regard to price fixing and percentage of profit. Every effort has been made to wipe out the activities of price-cutters. The operations of such people were a source of annoyance to legitimate dealers and had a bad effect on their relationship with the firm and their enthusiasm for the product. By keeping a close check on all channels of distribution the company have been able almost to stamp out the price-cutter. The sound dealer knows now that he will not have to lose any profit through cutting to meet competition or by having stock standing on shelves over long periods.

The foregoing was extracted from an article by W. C. House, of the Larvex Division, Zonite Products Corporation, reproduced in *Printers' Ink*. Although the story concerns an American company, we extracted it because the principles involved and the problems faced apply equally well in this country. Many British manufacturers could adopt the methods used with such success by the Larvex concern.—Ed.



An impression of an Avery operator preparing the negative in blockmaking.

AVERYS

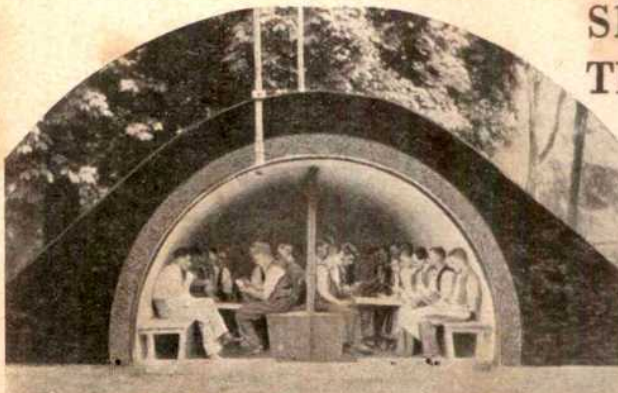
Blockmakers of Distinction

In addition to expert photo engraving we specialise in ARTWORK, RETOUCHING, PHOTOGRAPHY, TYPESETTING & STEREOTYPING. Avery craftsmen co-operate to give you a complete advertising service Day & Night.

From Rough Layout to Finished Block

AVERYS SERVICES LTD

57-41, LOWER MARSH, S.E.1 Phone WATerloo 4027



Shelters Like This Are Easy To Build

Here's a simple type of factory shelter which any firm with a bit of spare ground could construct. Details available: Industrial Editor, Business, Whitefriars House, Toller Street, London, E.C.4

TAYLORS FOR ALL TYPEWRITERS

Cash Registers, Coin Changers, Wage Payers, Cashiers, Calculators, Time Recorders, and All Business Appliances, Adding Machines and Duplicators **HIRED AND REPAIRED**

SAVE TIME—HIRE AN ADDER FOR STOCKTAKING

ADDOGRAPH

The Simplest Portable Adding, Listing Machine
Delightful to use.



8 col. to add from 1d. to £99,999 10s. 11d.
9 col. to add from 1d. to £999,999 10s. 11d.
also for ordinary numbers, decimals, etc.
Hand and electric models with or without wide paper carriages.
No Modern Office can afford to be without one.

Bijou



THE BIJOU QUIET PORTABLE

Its quietness and light touch are real aids to efficiency, while its compactness, lightness, reliability and beautiful work make it THE BEST. With four-row standard keyboard, complete in case. (Weight 8 lb., nearly 2 lb. lighter than all other 4-bank portables.)

£14 14s. 0d.,
3-bank models from
£9 9s. 0d.,
complete in case.

ELIMINATE LOSS AND FRAUD BY USING A "SAFEGUARD" THE BEST CHEQUE PROTECTOR



Used by leading Banks and firms. Do you realize that an altered cheque is your own liability? Great Bargain. £9 9s. each.

All makes of Cheque Writers at half usual prices. Ask for list.

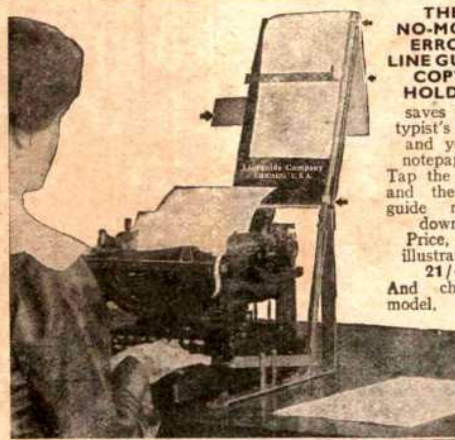


BARGAIN OFFER

Fire-resisting and Vermin-proof Steel Office Cupboards, finished art green, lever lock, duplicate keys.

2 ft. high, 14 in. wide, 12 in. deep, 30 in. high, 18 in. wide, 18 in. deep, 6 ft. high, 2 ft. wide, 18 in. deep, as illustrated. £4 10

All carriage paid. Other sizes in stock. Half the price of wood. Essential for storing Books, Papers, Box Files, Letter Trays. Other Furniture equally cheap.



THE NO-MORE ERROR LINE GUIDE COPY-HOLDER
saves the typist's time and your notepaper. Tap the lever and the line guide moves down. Price, as illustrated. 21/-

And cheaper model, 15/6



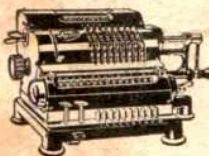
MAIL OPENED IN QUARTER TIME
busy office, no torn cheques, etc. £2 2s. post free



THIN EDGE ERASER

Acts like propeller pencil, always clean and sharp edged. Best quality nickel plated, 2/6. 2nd quality nickel plated, 1/2. Refills 1/6 per dozen.

ROTARY CALCULATORS ALL MAKES FROM £10 10s.



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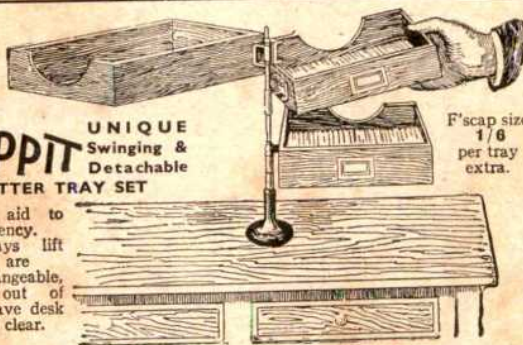
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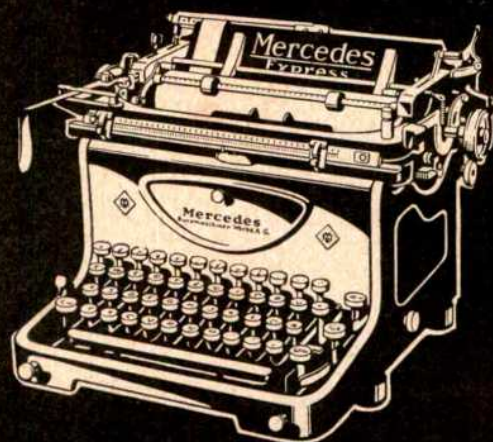
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APRIL, 1939

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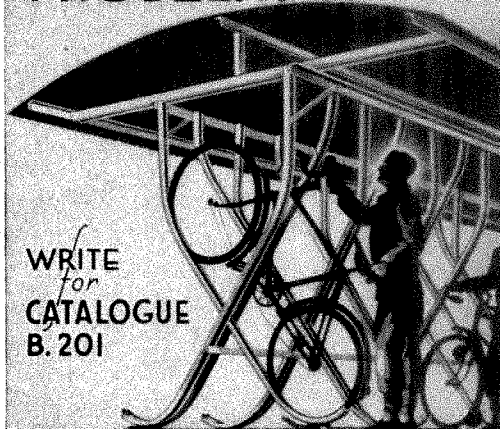
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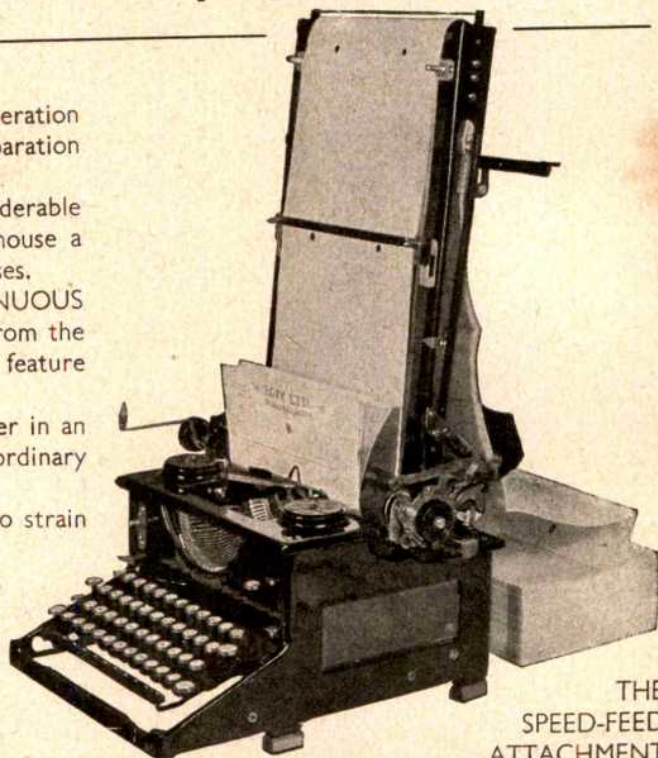
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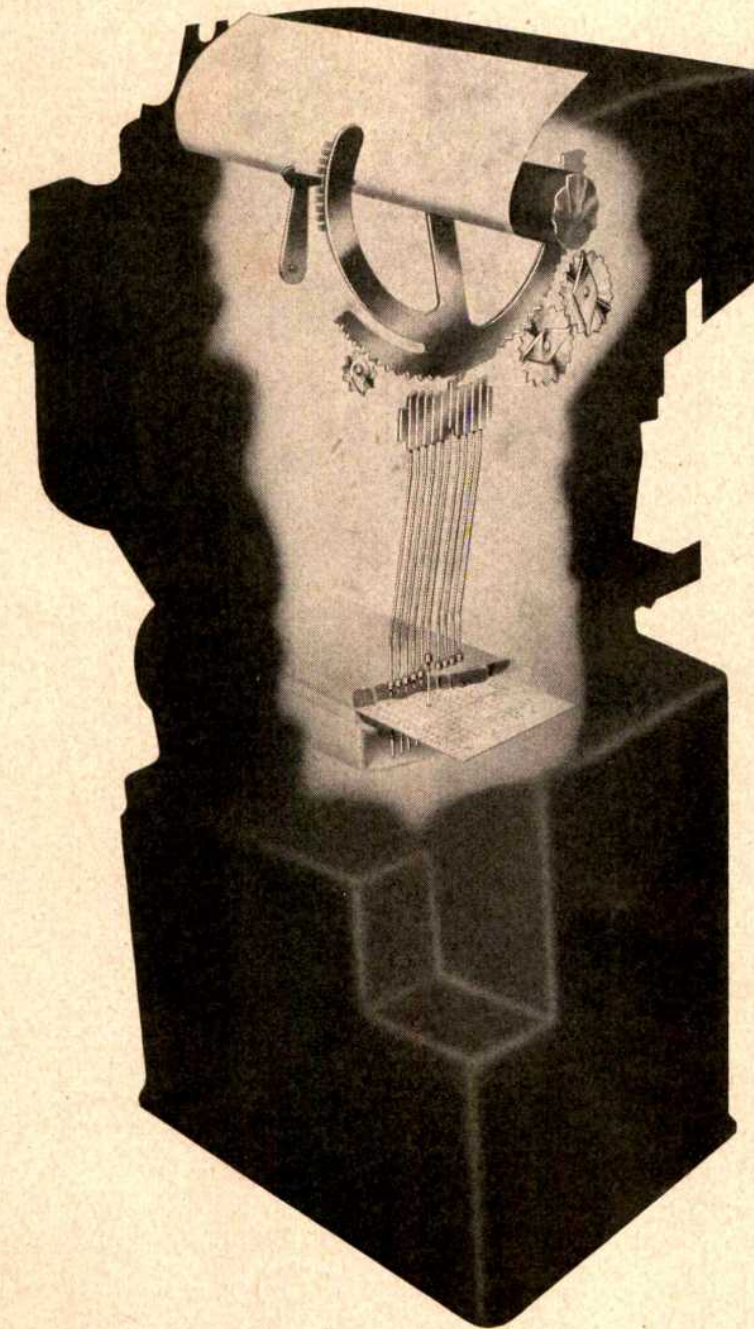
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Management's Vital Task is—

Constructive Cost Cutting

Here is a plan for ACTION

CONSTRUCTIVE cost cutting is a vital task for management to-day if profits are to be increased or maintained. The policy assumes a new importance because a drive for greater sales volume will not alone achieve the margin of profit needed; the ratio of profit to sales has seriously declined in recent months in many industries.

There is a lot talked about constructive cost cutting, but comparatively few firms are able to point out successful examples of the policy. That is because a fundamental condition to success in a real constructive cost-cutting programme is complete control by management over every activity of the firm. Few managing executives have "finger-tip" control; thus they cannot know the full result of any so-called economy in, say, a year's time.

The importance of this point cannot be overstressed. Management must start by introducing the necessary control. The system of control described, for example, in the article on page 9 of this issue would enable a firm to tackle current cost problems with a certainty of success. It would prevent a policy of "cost slashing" which many executives imagine to be "effective economies."

Given the necessary basis for starting an economy drive, the question arises: What are the first steps to be taken? Experience shows that best results are obtained from a broad-scale effort embracing all activities of the firm. Briefly, the effort includes: (1) reorganization in the factory; (2) reorganization in the office, the sales and other departments; (3) formulation of long-range policies in production and marketing.

It does not follow, of course, that every department needs complete reorganization, but if management are prepared for such large-scale readjustment they will do the job thoroughly.

Let us take the case of a well-known manufacturing firm which recently carried through a cost-cutting drive, there-

To-day almost every firm is faced with rising costs which are narrowing the profit margin. An economy drive is essential to increase—even maintain—profits. Outlined here is a comprehensive cost cutting policy that has been successfully applied.

by C. E. DAY from an interview with

S. W. LEVERS.

Rawlplug Co. Ltd., London.

by adding nearly 5 per cent to their profits.

They found that the expansion of business during 1935-6-7 had concealed a gradual all-round increase in expenses. When orders were coming in easily, selling expenses were not critically examined; when money was not needed urgently, accounts receivable were less closely followed up; buying of raw materials and supplies had been on a wasteful scale, and prices, discounts and extras had not been scrutinized; inventories were not so rigidly checked, therefore stocks had accumulated.

Costs Offset Profits From Extra Sales

These are only a few of the main sources of increased expenses that had crept in at a thousand points during the boom period. In this the firm's experience has been similar to that of hundreds of manufacturing concerns. And it is these extra costs which have been narrowing down the profit margin during the past year, despite the fact that sales have been increasing.

Let us consider the steps taken to correct this position.

Reorganization in the factory: By

ordinary standards the factory of this company was up to date and efficient, yet investigation showed that big economies could be effected by (a) reorganization of plant and layout, (b) readjustment of work and workers.

As the demands of a market change and a company's products sell in different quantities a previously efficient layout of plant becomes inefficient. The company found here a fruitful source of economizing in time and labour. Machines were rearranged so that, for instance, it was easier to switch from one job to another. They were also concentrated in convenient groups for production of one line or type of products. This, in turn, led to rearrangement of feeding raw materials to machine lines. As a result there was less handling of materials to the machines and less handling of finished products.

Investigation also showed that two key machines were largely responsible for hitches in production. The time-lags involved were only a matter of minutes on each occasion but sufficient to have a disturbing effect on all machine lines. To correct this inefficiency the number of routine inspections of the machines was doubled, a precaution which has almost eliminated stoppages.

Each firm, of course, has its own

special technical problems in plant layout. The manner in which the company discussed tackled its problems merely serves as an example of the type of investigation that can be carried out.

The readjustment of work and workers started with time study of all work. This was carried out by the firm's own technicians and avoided, therefore, arousing the usual hostility to time study. As the employees knew the research staff and realized that the scheme was being carried out for the benefit of themselves as well as the firm, co-operation was obtained.

It is important to stress that this trust was rewarded. The firm is now paying higher wages per person and has also sorted employees into more suitable jobs. The firm has benefited by getting more production per man and more contented workers.

As is always the case in this type of reorganization, one move leads to another. For example, in dealing with certain products which had hitherto been manufactured as the demand arose it was found that the total supply for a year could be produced at one uninterrupted run of the machines. The

copy-typing work went to the central department. By this means the number of staff was reduced by 40 per cent, while the total output actually increased by nearly 10 per cent.

Economies By Simplification of These Forms

More economies were effected by simplification of forms, documents, letter-headings, etc. As so often happens, over several years each department had devised some sort of form or document which it thought essential. The overlapping was considerable and, when investigated, found mostly to be unjustified. Many forms were eliminated; others were modified to dovetail with similar forms. Standard sizes, types, layout, and so on, were introduced; printing and paper costs were cut by about 50 per cent.

In the sales department it was found that costs of the average salesman had risen by 8.5 per cent as compared with figures for three years ago. Most of this was due to (a) more frequent mailings to salesmen, (b) the use of a system of reports, and (c) the growth in the

call gives the salesman all the pertinent facts about the customer.

This is an example of constructive cost cutting through spending a little extra money. The additional cost has been more than offset by increased sales.

Another economy was obtained through replanning salesmen's routes. The growth in the number of accounts had made previous route plans obsolete. The whole matter was reconsidered. In some cases territories were slightly altered to meet new conditions. The final replanning enabled every salesman to cut travelling time and costs to a minimum in making his calls.

Similar replanning took place in distribution, collection and delivery. The dispatch department also investigated all costs on the transport of goods by rail, road and water. By contracting to send specified volumes of products via certain transport systems, substantial reductions in charges were obtained.

Where prices and conditions of the markets warranted, the purchasing department was also able to "buy forward." The favourable prices gained and the delivery schedules arranged brought about direct and indirect cuts in costs. For instance, the factory was able to set up production plans for longer terms than hitherto—an economy in time and labour.

Long-range policies in marketing: Naturally, buying ahead of raw materials and setting up of production plans must depend on future markets. Management must, therefore, judge matters carefully before making such commitments.

The firm whose programme we have examined made an exhaustive study of market conditions. Every available figure was taken from previous reports and analysed. Sales were broken down for areas, sections of areas and towns. The figures were studied alongside facts about the economic conditions of the markets at the time the sales were made. All other available information was also studied.

Current facts, figures, news and so on were next considered. Detailed investigation into the trend of prices, movement of markets and the economic outlook was made. As much as possible the management tried to foresee the future in relation to the firm's products. And, finally, a forecast of sales expected during the coming two years was made. On this basis the buying, production, sales and other departments acted.

Up to the present time the forecast has been over 96 per cent accurate. The firm, of course, is not allowing its work to rest. Readjustments are always being made in light of new facts. All such key information as Board of Trade returns, bank statistics, retail sales, motor-car registrations, rail traffics, commodity and raw material prices, etc., is constantly being studied by the management.

The brief outline here of what this company has done is necessarily incomplete, but it does indicate the type of policy which is being put into effect by enterprising firms to-day.

Lasting and constructive economies can only be obtained if a company applies its cost cutting policy consistently.

For a major drive, as described in this article, the plan should be threefold: (1) Reorganisation in the factory; (2) Reorganisation in the office, sales and other departments; (3) formulation of long-range policies in production and marketing.



cost of storing the products was lower than that of periodically switching machines to cope with current demand. This practice also eliminated the "peak and valley" problem. Machines are now put on these jobs when demand on production is at its lowest. The works manager's job is also easier, as he can follow a smoother, less worrying routine than formerly.

Reorganization in the office, sales and other departments: In the company concerned the office had been mechanized several years ago. The first part of the investigation was to find out (a) if it was over-mechanized and (b) if any machine should be replaced with a more up-to-date model.

Examination showed that by using two of the latest billing and accounting machines, four old machines could be scrapped and two office workers released for other jobs.

Another big saving was made by introducing the "pool" typing system. Dictating machines took the place of secretaries and all transcribing and

number of accounts in each salesman's territory.

An unnecessary number of letters and directions were being sent to the men in the field. Examination showed that as a general rule one mailing a week would be sufficient.

The report system in use did not seem to justify its existence. True, the office had files full of information useful for statistical work, yet there was no direct use of it for sales building. After some consideration of this point it was decided that the information should be used by the men who supplied it—the sales force.

Now, when a salesman sends in his reports, all the vital factors are abstracted and posted to a card. There is one card for each account. On it is given details of what the customer has bought in the past six months, what his response has been to efforts to sell him other lines and so on. Each week, cards of customers on which the salesman will call during that week are posted to him. A glance at a card before he makes the

How to Use STATISTICAL CONTROL in Small and Medium Size Firms

By E. D. P. HARDY, F.I.I.A.,

Industrial Consultant
and Company Director

WHEN the annual accounts give you a surprise it means that no system of statistical or higher control is in operation to show how the position each month compares with the end of the last financial year.

Every managing director wants current year profits to show an improvement on last year, but it is not necessary to await auditors' figures to know what has happened.

Monthly Trading and Profit and Loss accounts, although helpful, do not quite achieve the intended purpose.

It is comparatively easy to have all the essential "control" figures for each month, and for the year ending each month.

The last financial year's figures are the basis; add those for the next month (making 13 months) then deduct the

figures for the corresponding month of the previous year. This gives the result for a fresh period of twelve months, advanced by one month from the financial year. This is done each month until twelve separate months have been added and twelve subtracted, and the new financial year is arrived at. Thus the trend of results upon an annual basis for each month is clearly revealed.

The usual Trading and Profit and Loss account shows profit earned but not how it has been earned. From the management's point of view the figures are of little use unless broken down into some form which will give a proper basis of comparison.

How Figures are Put on Annual Basis

The example given (see illustrations) shows how the figures of a company can be broken down and put on an annual basis. The example is based upon a typical investigation.

Fig. 1 shows figures as presented in three monthly Profit and Loss accounts.

The first three columns in Figure 2 show the various expenditures in Fig. 1 broken down into their proper categories. There is a clear line of demarcation between expenses for which the works manager is responsible and those outside his control.

Expenditure each month in respect of each category is clearly shown—a marked improvement on the old

They give a disjointed impression, even if figures for the previous month and the corresponding month of the previous year are included.

This system has, as its foundation, the trend or moving annual method. The aim of all trading is to obtain maximum profit during the current financial year. To visualize the true position at any time it is essential to think in terms of years, not of isolated months.

Complete Fluctuation Cycle Needed For Accuracy

The moving annual principle is important for another reason. In most businesses, particularly where trading is seasonal, monthly results show wide fluctuations. It is therefore difficult to determine from these figures whether the trend is upward or downward. Only by comparing twelve-monthly periods, each containing a complete cycle of fluctuations, can you obtain a trend.

Although all managing directors must think in terms of annual profits, the majority are content to have annual figures. They then make shift with monthly figures until the next financial year ends. This is quite unnecessary.

ITEM	MONTH OF			By Sales " Closing Stocks	MONTH OF		
	February 1938	March 1938	April 1938		February 1938	March 1938	April 1938
	£	£	£		£	£	£
1. To Opening Stocks	1,653	2,014	2,063	3,061	3,932	5,118	
2. " Wages	1,432	1,536	1,560	2,014	2,063	1,722	
3. " Purchases	814	887	978				
4. " Carriage Inwards	142	132	178				
5. " Gross Profit G/d	1,035	1,426	2,061				
	5,075	5,995	6,840		5,075	5,995	6,840
6. To Salaries	100	140	140	By Gross Profit B/d	1,035	1,426	2,061
7. " Commission	125	189	204				
8. " Stationery	17	10	12				
9. " Advertising	42	48	7				
10. " Stores	1	4	7				
11. " Elec. Power & Light.	58	42	39				
12. " Water	4	4	8				
13. " Coal and Coke	7	9	8				
14. " National Insurance	35	38	37				
15. " Travelling Expenses	26	41	19				
16. " Repairs and Renewals	21	10	120				
17. " Bad Debts	14	10	10				
18. " Legal & Accountancy Chgs.	21	21	21				
19. " Rent, Rates & Taxes	25	25	25				
20. " Telephone	9	12	6				
21. " Postages	2	1	2				
22. " Petty Cash	4	5	5				
23. " Inspec. Workmen's Comp.	24	24	24				
24. " Insurance General	24	24	24				
25. " Motor Car Expenses	20	30	25				
26. " Miscellaneous	125	125	125				
27. " Deprec. Plant & Machy.	20	20	20				
28. " Deprec. Buildings	20	20	20				
29. " Deprec. Motor Cars	33	33	33				
30. " Bank Interest & Chgs.	10	10	10				
31. " Net Profit	89	358	928				
	1,035	1,426	2,061		1,035	1,426	2,061

Item No. in Fig. 1.	ITEM.	MONTH OF			YEAR ENDED			
		February 1938	March 1938	April 1938	January 1938	February 1938	March 1938	April 1938
		£	£	£	£	£	£	£
3.	A. Direct Material	814	887	978	9,296	9,366	9,362	9,423
2.	B. Carriage Inwards	142	132	178	1,383	1,386	1,377	1,383
	C. Direct Labour	1,358	1,459	1,430	15,289	15,534	15,311	15,234
	TOTAL	2,314	2,478	2,486	25,968	26,286	26,050	26,040
	FACTORY OVERHEAD							
	Indirect Material							
10.	A.I. Stores	1	8	7	70	70	71	73
11.	2. Electric Power	58	42	39	368	371	373	384
12.	3. Electric Lighting	4	4	8	60	60	60	62
13.	4. Water	7	9	8	44	45	42	46
14.	5. Coal and Coke	7	9	8	56	57	56	56
15.	6. Repairs and Renewals	9	10	12	58	58	57	60
	TOTAL INDIRECT MATERIAL	59	63	64	1,026	1,026	1,025	1,051
	Indirect Labour							
2.	B.I. Foreman	30	28	29	326	331	333	337
2.	3. Stokers	25	27	24	296	298	295	300
2.	4. General Labour	19	22	17	224	226	227	228
16.	5. Maintenance	12	7	26	140	143	141	144
	TOTAL INDIRECT LABOUR	86	84	96	986	998	1,000	1,009
	General Charges							
6.	C.I. Management Salaries	63	63	63	744	746	748	750
6.	2. Works Office Salaries	24	25	27	301	301	303	304
14.	3. National Insurance	33	36	35	414	414	416	415
20.	4. Telephone	3	4	2	38	40	36	37
23.	5. Workmen's Compensation	28	30	31	360	362	360	360
8.	6. Stationery	2	2	2	24	24	24	24
26.	7. Miscellaneous	1	-	-	7	8	8	8
	TOTAL GENERAL CHARGES	154	160	160	1,888	1,894	1,897	1,895
	Standing Charges							
19.	D.I. Rents, Rates and Taxes	17	17	17	204	204	204	204
24.	2. Inspec. Plant & Machy.	12	12	12	144	144	144	144
24.	3. Inspec. Buildings	3	5	5	36	36	36	36
27.	4. Deprec. Plant & Machy.	125	125	125	1,500	1,500	1,500	1,500
28.	5. Deprec. Buildings	20	20	20	240	240	240	240
	TOTAL STANDING CHARGES	177	177	177	2,124	2,124	2,124	2,124
	TOTAL FACTORY OVERHEAD	476	484	582	4,024	4,048	4,047	4,097

fashioned Trading and Profit and Loss accounts. The figures, however, need taking further. They must be put on a moving annual basis.

The last four columns show the moving annual totals for the years ended January, February, March and April 1938. Where practicable these can also be expressed in terms of cost per unit of production.

Control Points Are Established in this Way

In Fig. 3 a statement of account has been compiled for the months of February, March and April 1938. This relates various items of expenditure to sales turnover and shows the surplus or profit at certain stages. Definite control points are established; the figures at each of these points are shown as a percentage of sales turnover.

It will be seen that, so far as *monthly* results are concerned, the position shows rapid improvement. Not only are the sales turnover and profit rising sharply in terms of money but also as a percentage of sales turnover.

But, as I will show, in spite of these apparent improvements, the trend of sales turnover and profit is actually showing a steady fall.

Having in mind results for the current financial year, we want to find the trend of results between the last financial year and the year to date. Accordingly a similar statement of account upon the moving annual principle is compiled (see Fig. 4). This shows the statement of account for the years ending February, March and April 1938. In addition, the corresponding figures for the last financial year (year ending September 1937) are shown.

This is the key statement and shows clearly how the business is progressing. It presents a very different picture from the strong position which rapidly improving profits in March and April appeared to show in Fig. 3. Although figures for the year ended February 1938 show there has been a substantial improvement since the last financial year, each of the two following moving annual totals (M.A.T.s) reveals a falling off in the trend of both sales turnover and profits. Furthermore, gross trad-

ing profit and final profit, expressed as percentages of sales turnover, each show a decline. In other words, rate of profit as well as the actual amount is falling. Immediate action can rectify the trouble before it gets out of control.

To visualize the position more clearly, results obtained are shown graphically in Figs. 5 and 6.

The four "fields" in each chart show sales turnover, gross trading profit, final profit and factory surplus absorption. (The latter is the extent to which the factory surplus is absorbed by exceptional trading expenses, company overheads and special charges.)

Fig. 5 shows the monthly figures as far back as the beginning of the last financial year. The curves show wide fluctuations, rising to a peak in spring and falling to their lowest point in the autumn. They give little indication of the *trend* of the business.

This Graph Reveals The True Trend

Fig. 6 shows curves for the eight M.A.T.s derived from the figures in Fig. 5. What has happened since the end of the last financial year can now be seen at a glance. Although each of the curves starts with a steady rise, the last few M.A.T.s show a downward trend.

Unless steps can be taken to arrest this fall in trend the gain achieved in earlier months will be lost by the end of the financial year. The dotted line in the field, representing final profits, shows a projection to the end of the financial year of the approximate mean trend of the last three annual totals. This line cuts the vertical dotted line, indicating the end of the year, at a point representing a profit of about 1,400. Thus, unless drastic action is taken, the profit for the current financial year will show a fall of several hundred pounds on last year.

At any time, a fair estimate of the profits which the present financial year will produce (assuming the present trend to continue) can be visualized from the chart. Everything possible can be done to improve the trend to obtain a profit above this estimate.

When a firm is content to rely solely upon the yearly audit to ascertain true profit, all kinds of losses may take place during the year. They will never be brought to light because they have been covered up by profits in other months. So long as there is a reasonable profit,

Item No. in Fig. 1.	ITEM	MONTH OF			YEAR ENDED			
		February 1938 £	March 1938 £	April 1938 £	January 1938 £	February 1938 £	March 1938 £	April 1938 £
	EXCEPTIONAL TRG. EXPS.							
	N.I.	-	-	-	-	-	-	-
	COMPANY OVERHEADS							
	Selling Expenses							
6.	A.I. Travellers Salaries	105	100	110	1,274	1,275	1,265	1,260
7.	Commission	125	189	204	1,473	1,479	1,469	1,456
15.	5. Travelling Expenses	19	22	17	225	224	222	220
25.	4. Motor Car Expenses	20	30	25	238	238	237	236
6.	5. Stationery	-	5	3	75	75	75	75
9.	6. Advertising	-	42	3	142	142	144	144
20.	7. Telephone	3	4	2	40	41	41	42
29.	8. Depreciation of Motor Cars	33	33	33	396	399	402	405
	TOTAL SELLING EXPENSES	311	423	394	3,863	3,873	3,855	3,836
	General Charges							
6.	B.I. Administrative Salaries	78	122	110	1,429	1,427	1,439	1,449
6.	2. Office Salaries	30	30	30	360	360	360	360
14.	3. National Insurance	2	2	2	24	24	24	24
15.	4. Travelling Expenses	9	19	2	144	145	150	147
20.	5. Stationery	9	5	7	84	84	85	84
21.	6. Telephone	3	4	2	41	41	42	41
21.	7. Postage	3	1	2	27	27	26	26
22.	8. Petty Cash	4	3	5	48	49	50	52
17.	9. Bad Debts	41	-	10	172	185	185	193
10.	10. Legal & Acctg. Chgs.	21	21	21	252	252	252	252
11.	11. Electric Light	4	1	3	41	41	41	41
26.	12. Miscellaneous	4	1	6	33	33	34	37
	TOTAL GENERAL CHARGES	206	211	200	2,655	2,666	2,684	2,706
	Standing Charges							
19.	C.I. Rates and Taxes	8	8	6	96	96	96	96
24.	2. Insurance	9	9	9	108	108	108	108
	TOTAL STANDING CHARGES	17	17	17	204	204	204	204
	Fixed Charges							
30.	D.I. Bank Interest & Chgs.	10	10	10	120	120	120	120
	TOTAL COMPANY OVERHEADS	544	661	621	6,842	6,863	6,863	6,866

BLANK COMPANY LIMITED
STATEMENT OF ACCOUNT

Figure 5.

MONTHS OF FEBRUARY, MARCH, AND APRIL 1938.

ITEM	MONTH OF FEBRUARY 1938				MONTH OF MARCH 1938				MONTH OF APRIL 1938			
	£	£	£	%	£	£	£	%	£	£	£	%
1. Sales Turnover			3,061	100.00			3,932	100.00			5,118	100.00
<u>COST OF MANUFACTURE</u>												
2. Opening Stocks		1,655				2,014				2,065		
3. Direct Materials	814				697				978			
4. Overhead Insurance	1,128				1,459				1,460			
5. Factory Overhead	1,476	8,799			1,460	2,962			1,460	3,228		
7. TOTAL		1,448				4,976				5,291		
8. Closing Stocks		2,014				2,065				1,722		
9. <u>COST OF STOCKS SOLD</u>			2,428	79.34			2,915	74.08			5,569	69.15
10. GROSS TRADING PROFIT			633	20.66			1,017	25.92			1,549	30.27
Deduct:-												
11. Exceptional Trading Expenses			-				-				-	
12. GROSS TRADING PROFIT			633	20.66			1,017	25.92			1,549	30.27
Deduct:-												
<u>COMPANY OVERHEADS</u>												
13. Selling Expenses		311				423				394		
14. General Charges		206				211				200		
15. Standing Charges		17				17				17		
16. Fixed Charges		10				10				10		
17. FINAL PROFIT			89	2.91			358	9.11			948	18.34

ITEM	Item Index	FEBRUARY 1938				MARCH 1938				APRIL 1938				SEPTEMBER 1937				
		£	s	d	£	£	s	d	£	s	d	£	s	d	£	s	d	
1.	Sales Turnover				48,113	100.00			51,905	100.00			58,420	100.00			56,981	100.00
2.	COST OF MANUFACTURE																	
2.	Opening Stocks			2,226			2,255			1,923							2,206	
3.	Direct Materials	814					949			978							9,162	
4.	Overhead Insurance	1,128					1,459			1,460							1,218	
5.	Factory Overhead	1,476					1,460			1,460							1,536	
				32,120			32,096			37,997			33,950				40,540	36,560
7.	TOTAL			34,826			34,769			33,861							33,933	
8.	Closing Stocks			2,014			2,065			1,722							2,439	
9.	COST OF GOODS SOLD			32,812		36,779		32,826		32,139		77.00	32,139		77.59		31,494	39,127
10.	FACTORY SERVICE			9,773		47.22		9,639		22.48			9,201		22.41		9,147	21.77
	Deduct:-																	
11.	Exceptional Trading Expenses																150	8.33
12.	GROSS TRADING PROFIT			9,773		23.28		9,619		22.54			9,201		22.41		8,617	21.55
	Deduct:-																	
	COMPANY OVERHEADS																	
13.	Selling Expenses			2,211			2,252			2,076			3,494				2,470	
14.	General Charges			206			211			200			2,106				1,700	
15.	Standing Charges			17			17			17			17				17	
16.	Fixed Charges			10			10			10			10				10	
				226		6,863	16.77			2,206		16.50	6,864		16.58		6,892	17.46
17.	FINAL PROFIT			9,810		4.90		9,756		4.50			9,243		5.93		8,777	

the board are often satisfied. It is by the discovery and elimination of such hidden losses that profits can be increased.

It often happens that under the cover of rising sales and rising profits a steady fall in the ratio of profit is overlooked. A control system provides a monthly X-ray of the company's results so that hidden losses are brought into view.

Department Analysis Reveals Where Losses Occurs

It is usually worth while to break down the figures into departments. A profit for a works containing four departments, for instance, might comprise a profit in three out of the four and a loss in the remaining one. Unless departmental figures are shown separately, this loss may never be brought to light. The unprofitable department will be "carried" by the profitable ones. Once loss is disclosed it can be eliminated.

Most executives are busy men and should not spend their valuable time studying detailed statistics. The control system described here aims at pre-

sending all vital figures every month so that they can be easily and quickly assimilated. Directors and higher executives can see at once which way things are going from the two charts and the statement of account. The detailed figures in the analysis of expenditure are available when required.

By this means the management is enabled to keep in continuous touch with the trend of affairs, and there are no rude shocks awaiting directors when the auditors' figures appear some time after the end of the financial year.

In preparing an example such as this, it is only possible to touch upon some of the main principles used.

(1) The application of control methods to analysis of sales illuminates the sales question from an entirely different angle and brings to light all kinds of weaknesses hitherto undisclosed.

(2) The monthly control report with charts, etc., provides ample evidence in support of a request for a bank loan. Statistical analysis of the company's figures enables an investor to see possibilities not apparent in the conventional method of presenting accounts.

(3) The balance sheet in a control

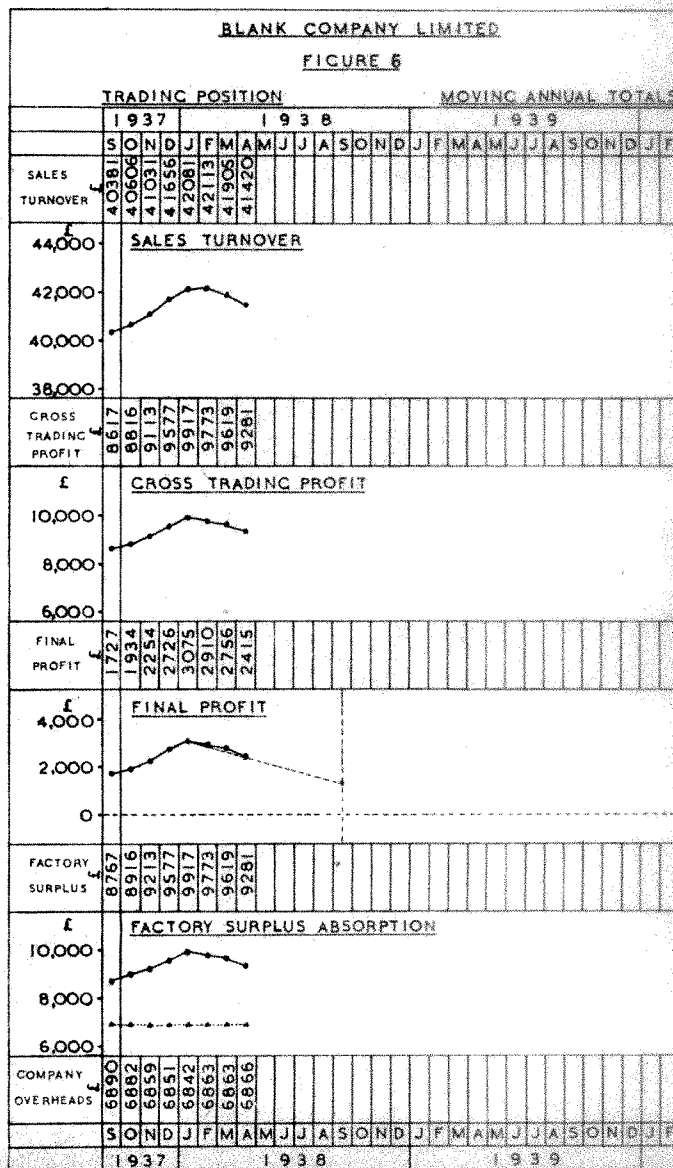
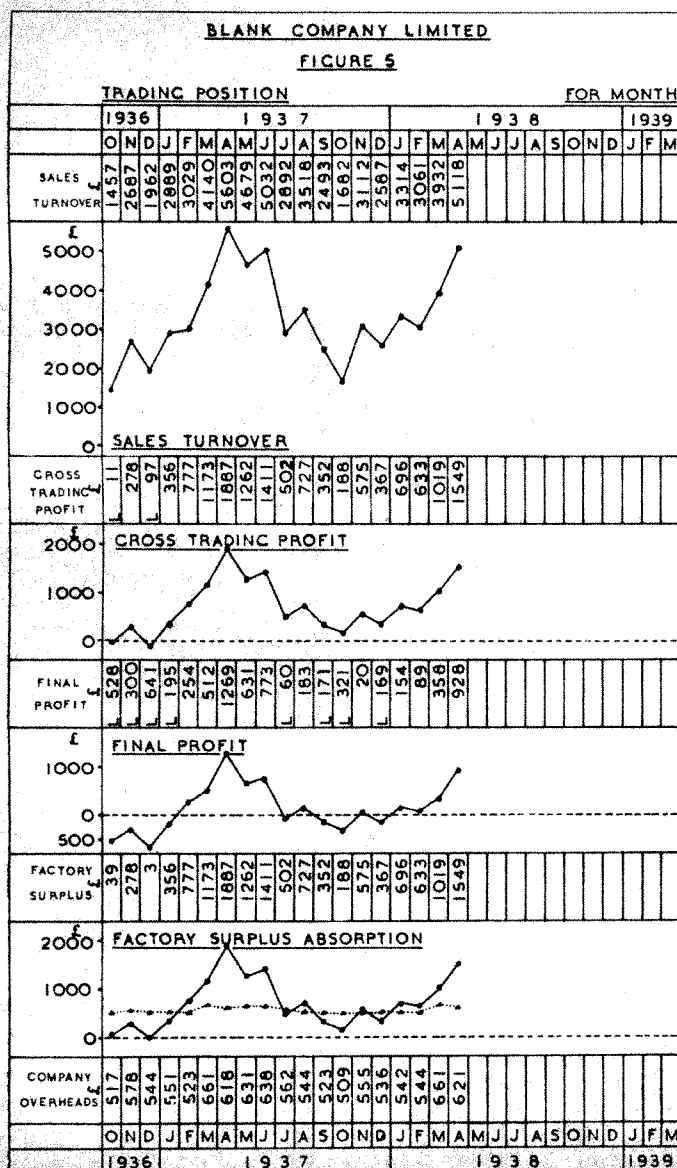
system eliminates the usual mental acrobatics in finding the true position of a company. It is feasible and helpful to have a balance sheet presented each month. From the information revealed you can obtain, by means of ratios, a useful check on a company's efficiency.

The principle ratios are:

- (a) liquid assets to current liabilities;
- (b) sales turnover, M.A.T., to accounts outstanding;
- (c) current assets to current liabilities;
- (d) sales turnover, M.A.T., to stocks and work-in-progress.

These may appear unnecessary refinements, but a little thought reveals that much money can be saved by watching such ratios and acting upon the information disclosed.

In this article Mr. Hardy has given as much detailed information as possible while explaining the principle of the system of moving annual totals. But the problems of higher control, whether the firm is big or small, in principle remain the same. Executives interested in this type of control can write to Mr. Hardy, c/o the Editor.



'ACTION on all our Decisions is Ensured by a Progress Committee'

THE problem of getting things done in business is fundamentally a matter of co-ordination, although many other factors must and do influence results. Adequate systems of control, follow-up methods, understanding between executives and between departments and recognition of the human factor all, of course, play their part. But co-ordination in policy and practice implies an understanding of every factor involved in management and the successful co-relation of each factor to the whole.

A man who is a successful departmental head, for example, will always tend to look at every problem from only the departmental point of view. That is good. But unless the managing director can use that man's enthusiasm and brains to work harmoniously with other sectional interests results may be bad, especially in getting things done.

There are, of course, many ways of co-ordinating all activities of a firm. Methods used by one man may not suit another, and vice versa. It is with this qualification, therefore, that I put forward my own method.

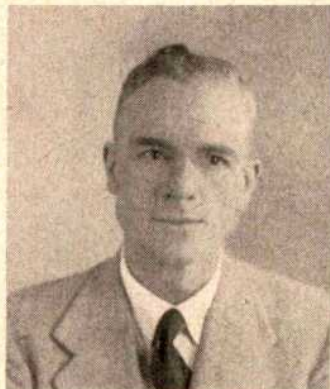
Three Major Factors That Get Action

As I see it, getting things done needs: (1) an executive organization; (2) careful selection of executive personnel; (3) routine control and check-up. Under these three broad heads are to be found all the essentials of successful co-ordination, therefore smooth progress in putting decisions into effect.

You will notice that I have put "an executive organization" at the top of the list. In our firm the organization is called *The Progress Committee*, and it is the key to getting things done. Without it executive work would be considerably heavier, less efficiently carried out, and we would have a multitude of delays, misunderstandings and muddles to cope with.

The committee is composed of the heads of the sales, production and accounts departments, with myself as chairman. We meet about once every fortnight. We have an agenda prepared containing all the current managerial problems which must be discussed and settled. Minutes of the meetings are taken, and every executive is given a copy to keep on file. Decisions made, therefore, are always before the executives, a reminder of what they are to get done to keep in line with the work of other departments.

Matters discussed and decided upon at these meetings cover everything from general policy to specific details concerning departmental work. Take, for example, the proposal to launch a new line. The sales manager must produce



Says
H. RICHARDS
Managing Director
S. WOLF & Co. Ltd.

his case, prove that there is a profitable market for such-and-such type of machine at so-and-so price. He gives full data to the meeting covering not only his market problems but also what he will expect the production and accounts side of the business to do.

The production manager will then state his case, say whether the model can be produced as required, what modifications are needed, what the production schedule will be, and so on. Then the accounts executive will deal with the financial side, give the costings, and other figures. Between us will we thresh out the matter so that everyone understands the other's point of view and, when I give my decision, accept it in full knowledge of responsibilities.

Even Small Items Discussed In Full

Next on the agenda may be a small point about deliveries or credit facilities. For instance, the sales manager may say that if he can get certain goods dispatched from the factory by, say, the 15th of the month he can open a new account with Messrs. X. To this the production head may answer: "No; it cannot be done." He will give his reason and suggests when delivery could be made."

At this point the accounts executive may raise an objection. He may say: "Look here, it is no good opening an account with Messrs. X unless we get cash on delivery. Their credit standing is no good. I cannot sanction credit terms to them."

In such a case as this we may decide on a cash on delivery order, the goods to be dispatched on the 20th, or to send the goods on the 20th and allow a week's credit. In any case, the decision

made leaves each executive with a clear understanding of the action he is to take in the matter.

The important feature about our meetings is that they help each executive to understand the difficulties and problems of other departments. They eliminate misunderstandings and create an atmosphere in which the policy of co-ordination can work effectively. They enable me, as managing head, to keep before the departmental executives the fact that they are all working for the firm, not merely for production or sales or the financial interests concerned.

With this co-operation and understanding gained, with each department agreeing to take certain specified action, it follows that each executive will be anxious and willing to keep to his schedule. Experience has proved this to be so.

In some cases, of course, our decisions take effect over a period of weeks or months. There is, however, no chance of the agreed schedule being forgotten. The item concerned recurs on every subsequent agenda and is reported upon by each executive so that I can see if progress is being maintained in accordance with the decision. This constitutes an infallible follow-up from start to finish, when the item is removed from the agenda.

Selected Executives of Calibre To 'Carry On'

Selection of executives is second on my list of "needs" for getting things done. Perhaps it should be first because, after all, the successful working of any system depends on the human beings operating it. But in our case we have executives of long standing; therefore the problem of selecting key men is not urgent.

Nonetheless I agree that the problem is vital. Our executives have earned their jobs by character, ability, knowledge and a sense of leadership. For instance, if I wish to go away for a few days I do not have to worry whether or not X can carry on. I know that he is able to shoulder full responsibility for his department and that work will flow smoothly on. I know, too, that the co-ordination of effort between departments will be uninterrupted.

Unless a managing director has this confidence in his senior executives the management of the business, in my opinion, is not satisfactory. But there are many managing heads who will not allow control to be exercised by executives in this free and healthy manner.

A capable head of a business I know is one of these men. Not long ago he was taken ill and had to enter a nursing-

(Continued on page 44)

Is Your Price Policy a SUCCESS Factor?

Prosperous Management Needs Check-Up—

Free Milk Plan Aids Efficiency

Price Policy is Always a Poser

PRICE is always a major factor in marketing almost any type of goods, and price policy is often a thorny problem for management. In the ultimate analysis price is, of course, determined by fundamental policies of the board.

The difficulty of price policies is well illustrated by the experiences of two firms we talked with recently. One, a nationally known concern, launched a line of electric irons. The price settled upon was 35s.

The second firm, a small but growing organization, also put an electric iron on the market—at 22s. 6d.

One Meets Schedule But Other Beats it

BOTH products were excellent in performance and attractive in appearance. Both have been successful. The big firm has sold out its production schedule; the little firm has been unable to keep up with demand. Their output plan has risen from 1,000 a month to 2,500 and they are still behind with deliveries.

Did that 'Plus' Profit Justify Competition?

BUT here is a vital fact behind the story: had the big firm sold its irons at around 25s., the small concern would not have entered the market. In other words, *that extra profit invited competition.* For it would seem that the two products are near to each other in quality, appearance and performance. Certainly the difference in selling prices is not the measure of difference in production costs.

Now the small firm can sell at a good profit and cut the price of their big competitor by 12s. 6d. What, then, was the policy that fixed the big firm's selling price at 35s.? Surely not manufacturing costs? No! It was knowledge that they could sell a given number of irons at that price. It was profitable production for a specific market.

THERE is no doubt as to the wisdom of the small firm's policy. They have cleverly seized a big market from under the nose of a big company. As the director told us: "We investigated the problem and planned produc-

tion from the viewpoint of selling at the lowest figure possible. In other words, we gave as much value to the customer as possible. And that is one policy, at least, which we believe necessary to success."

Cast Your Vote—And Let Us Know

WHAT is the right basis of determining price? To sell at a price you know the market will pay, or to sell at the lowest price possible?

Both policies are successful in some measure. We believe that the second policy is the one which pays the biggest dividends in the end.

What is your opinion?



This is the 'Port-a-Fone', the new 'wireless' inter-communicating equipment and system. It just plugs into the electric light socket in your office. Press the calling signal, flick the indicator to 'talk' and your voice is carried clearly to any other unit or units in the building. Operates on 110-240 A.C. or D.C. For details, write to: Editor, BUSINESS, Whitefriars House, Tallis Street, London, E.C.4

Management Should Analyse Progress

A FIRM'S steady growth over a period of years usually results in many "blind spots" in management. This is no reflection on the executives concerned. No matter how keen are the controlling brains they cannot see every phase of business in relation to top efficiency all the time. The fact that the firm has been growing obscures true perspective.

As a firm grows so does the need for new equipment, buildings, routine, personnel, etc., expand. Only a superhuman could maintain always from the start the fine adjustments and that

By the EDITORS

smooth co-ordination which is the hallmark of tip-top administration.

From time to time wise management pauses to analyse the firm's position and progress made. There should be periodic investigation into everything, from high policy to minute detail in routine.

Prosperous Firms Need a 'Check-up'

THE value of managerial "check-ups" is well illustrated by the case of a firm which I heard about recently.

A company which made rapid progress and substantial profits from its inception decided to reorganize and bring in fresh capital for further big developments. There was plenty of money available because the firm had an excellent record and attractive prospects.

One of the backers, however, asked the directors to allow a business consultant to make an investigation and report. When the report came out the consultant showed that had slightly lower dividends been paid on profits earned the company could have financed its big development scheme out of reserve funds.

Good Health At Low Cost

REPORTS from experts say that recent increase in liquid milk consumption is the greatest fillip to national fitness that has ever happened. Milk in schools, in industry, in milk bars, in the home, form an increasing contribution. Already they can measure the dividends in improved health, which will continue for years to come.

Firms which are issuing free milk to employees have found that it does help to improve health. Apart from the humanitarian viewpoint, the scheme pays for itself in more output, less fatigue, better work and less absenteeism.

Executives who are puzzled to find new ways to increase efficiency should try out the free milk plan. Most men as well as women employees can be persuaded to drink half a pint a day.

EXPORT CREDITS

Here are FINANCIAL FACILITIES that Your Firm Can Share

FACILITIES for building up export trade to-day surpass by far any that were available in the days when British business first began to capture world markets. It is true that "free trade" has been almost wiped out and that the manufacturer in 1939 has to penetrate a barbed-wire entanglement of trade restrictions, but he has new, conquering weapons of attack.

It is also true—and this is a vital point—that the small firm stands an equal chance with the big manufacturer in developing overseas trade. The same facilities are available.

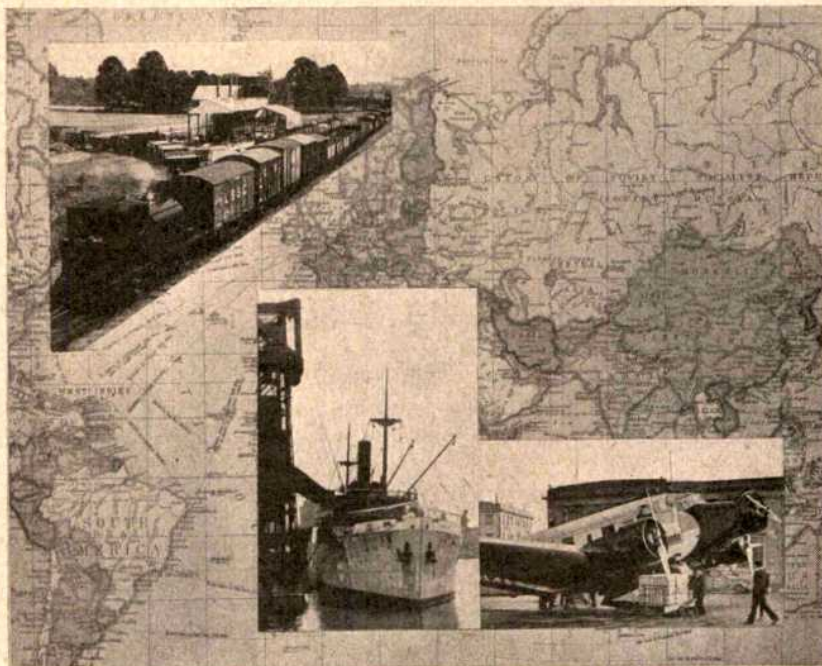
Last month, for example, I outlined the free services of the Department of Overseas Trade. Small manufacturers can, and do, use these services with outstanding success.

In this article I shall deal with that important problem—finance. I will show how any manufacturer who can find a market overseas can trade with security by using the services of the Export Credits Guarantee Department.

First you must get out of your head that this is an ordinary Government department. It is not. It is run on sound business lines. The management is in the hands of an Executive Committee of industrialists and other business men. The department not only pays for itself, but has built up a reserve fund. That is a good test of its efficiency.

The services provided by the department lead to these advantages: (1) about 75 per cent of the capital usually set aside by the manufacturer for bad debts is released, minus the premium charge; (2) the guarantees given by the department can be made over to the bank for cash advances which enable a firm to finance orders beyond its ordinary means; (3) business can be expanded quickly and in security; (4) the department's "inside information" about foreign commerce and finance is made available to the manufacturer. Vital news such as the standing of individual buyers, conditions of the markets and difficulties in dealing with overseas governments, help a firm in getting orders and avoiding bad debts; (5) the manufacturer can be sure that his losses cannot exceed a fixed proportion of outstandings.

Every executive will at once recognize



Every British firm, big or small, can now build up export trade in security by using the services of the Export Credits Guarantee Department. Major advantages include :

- (1) Guarantees up to 75 per cent of the invoice price
- (2) Premium rate, half of one per cent
- (3) Losses limited to a fixed proportion of liabilities
- (4) Cash advances for extra capital obtainable on guarantees

By
C. E. DAY

the importance of these five factors. They have a vital influence on export trade. The cover afforded reduces risks to the profit margin. Firms that know they can sell in overseas markets but cannot afford to tie up capital through the risks involved can, through the facilities provided, go after the business. By means of cash advances on guarantees even the smallest manufacturer can safely enter the export market.

Guarantees issued take two forms: short- and medium-term credits.

Examine first the short-term credit guarantee. Suppose you are exporting to two countries. In country "X" you have suffered no losses so far, but in country "Y" there have been several defaulters. Quite naturally you would propose to insure against "Y" but not "X." But if you wish to insure only

your bad trade the premium must, of course, be fairly high, maybe 2 to 2½ per cent on the invoice value of the goods for the usual period of three months.

While the department will do business with you on such terms, they have a much better proposal. This is the "comprehensive policy." It covers all your exports.

A little thought on this matter shows the value of the all-in guarantee. It gives (a) security against unexpected losses, (b) guidance and security in dealing with bad buyers, and (c) a low premium rate, say, half of one per cent for all coverage.

The value of this type of agreement has been proved time and again. For example, not long ago two north of England firms decided to guarantee

their exports. Both had good markets in two countries and sold similar goods. Payments from a country in the Near East had been difficult to obtain, but those from a European land had been made promptly.

Manufacturer "A" decided to insure trade in the Near East and let the other go unguaranteed. Manufacturer "B" took the comprehensive guarantee. In doing so he paid half of one per cent premium against his competitor's $2\frac{1}{2}$ per cent. In effect, he paid little more but got complete coverage.

For eighteen months or so nothing happened, then suddenly there was a collapse in the European country. Firm "B" lost only the profit margin on orders placed, but company "A" sustained very heavy losses.

This case is typical of many. More firms, however, are realizing that it pays to use the all-in policy. In total the extra cost is small, but security is complete. The 25 per cent risk involved on all trade amounts, then, to the profit margin or little more. Incidentally, the department leaves this margin of risk so that you stand to lose something in the case of bad debts. That gives you more than an academic interest in the soundness of your foreign customers.

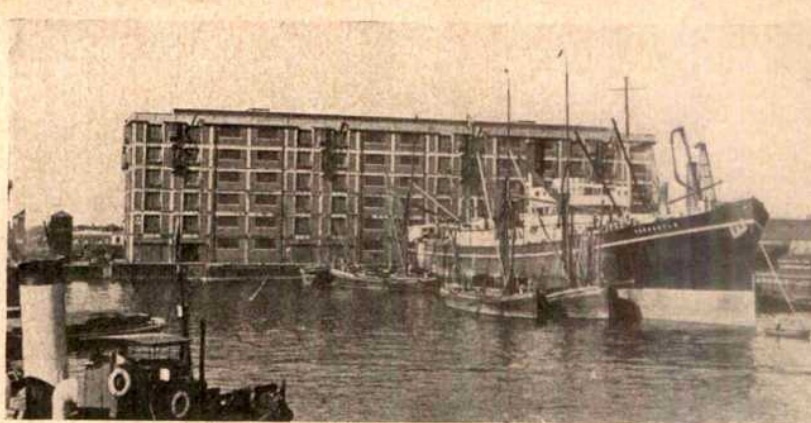
Guarantees Cover Long-Term Credit Risks

Most general trade is, of course, done on short credit terms, but there is a type of trade which calls for medium-term credits. Contracts for goods and work for foreign governments or municipalities, for instance, usually need this kind of credit. Sometimes it is necessary to extend credit over a period of years when orders are for bridges, railways, canals, ships, and so on.

Co-operation between yourself, the department and your bank is necessary in business of this type. Four factors, for instance, must be considered: (1) that the budgetary position of the borrower is sound; (2) that he has not been in the habit of over-borrowing; (3) that payments will not be affected by lack of currency in the country concerned; (4) that the obligation to pay in sterling will not be prejudiced by any existing or future legislation.

These are formidable points and take some time to be cleared up to everyone's satisfaction. Still, the department is always eager to help you get business. It has played a vital part in securing many major orders in recent years. For instance, one order financed not so long ago was obtained by the Westinghouse Company to supply £5,000,000 worth of brakes to the Polish railways. Detailed negotiating took many months, but the firm was finally able to take up the order in complete security.

Many small firms have hesitated to enter the exports field or dismissed the idea as impracticable because of the difficulties and cost of getting reliable information. Even big firms hesitate to-day because of the risks involved through government action. Currency restrictions, quotas, tariffs, embargoes,



The Department provides policy-holders with accurate, up-to-date information on buyers' markets, specific and general trends, etc.

This service enables you to :

- (a) prepare for crises
- (b) cut credits
- (c) curtail shipments
- (d) collect debts
- (e) open new markets

labour laws, and so on present intricate problems. And there is always a chance that new measures may be taken.

The department, however, is in a very different position as compared with private concerns. It has sources of information available only to a government. All the services described last month in the article on the Department of Overseas Trade are used by the Export Credits Guarantee Department. Vital information on finance and commerce flows to the department in a constant stream from every country in the world. And this "inside information" is available to you.

Let us see how it works. Suppose you have found a market in Chile and have got an order worth £1,000, payable in three months. You go to the department and treat the officials in the same confidential manner as you do the bank. The department will take up your problem. Most likely they will have on hand precise information about the standing of your customer, etc., and will be able to give you immediately a detailed, complete answer. They will tell you: (a) if the department will guarantee the full 75 per cent of your risk; (b) if not, the exact percentage that will be guaranteed; (c) or why they will not guarantee any part of the risk.

If the department will not take the risk, you can be sure that the business is not worth having. Remember, they have complete information on everyone and all factors concerned.

One of the best instances of the value of the department's information is the well-known case of the five exporters who traded with Brazil. The department one day got an alarming report about a very large buyer in Rio de Janeiro, a man who dealt with all the firms concerned. It was so unbelievable that this importer was in financial difficulties that the department cabled for

a check on the information. Meanwhile, the five exporters were warned.

Confirmation of impending collapse of the importer came back to the department, which then called a meeting of the five exporters. They were advised that big shipments about to be sent should be held up and steps taken to collect outstanding debts. Two firms agreed to this action; the others demurred.

For three weeks nothing happened. Then, suddenly, the buyer crashed hopelessly. That was the start of the Brazilian crisis. The department's "inside information" enabled traders to be warned long before it happened. Those that heeded the warning cut their losses by over 50 per cent.

Seven Specific Advantages For Policy-Holders

News of this kind is always available to manufacturers who are policy-holders. They receive it constantly. As a result they can: (1) prepare for a coming crisis; (2) cut credits; (3) curtail shipments; (4) collect outstanding debts; (5) keep information on buyers always up to date; (6) keep similar records of market conditions; (7) be informed about impending developments in dealing with foreign governments.

A good example of the value of this news service occurred recently. I was in the office of a friend of mine when one of his executives came in to ask if a certain buyer was safe for £800 credit for three months. The answer was an immediate "Yes." I asked my friend how he could make such a snap decision.

"The detailed reports from the Export Credits Guarantee Department

(Continued on page 43)

Here's a PLAN For Executive Co-operation for A.R.P. Economics

A SCHEME for "pooling" industrial A.R.P. knowledge has been devised by E. K. Cole, Ltd., the well-known radio manufacturers. This company makes an important contribution by offering to all industrial executives full constructional details and plans of the shelters they have built for 3,000 employees. Information on evacuation routine and training is also given.

Risks resulting from failures of individual experiments and their cost in time and money to firms make extensive co-operation and exchange of information an advantage to all concerns. The new scheme, therefore, helps every firm, big or small.

In war-time, industrial production may depend on how well factory staffs are protected. Responsibility for providing this protection rests upon manufacturers, many of whom have their plans and constructional work almost complete.

The money and time spent on these initial preparations are being dupli-

cated over and over again in all parts of the country. This places on British industry an expense ill-timed and unnecessary. The pooling of information in industrial A.R.P. would lighten it immeasurably.

An executive of E. K. Cole, Ltd., explained to BUSINESS: "We do not profess that our own scheme is complete or that it could not be considerably improved. We are seeking information as much as offering it.

"On the other hand, we have collected a large amount of information which may be of interest and help to others who have approached the problem from a different angle. We shall be very pleased to send details to responsible executives who care to apply and will gratefully welcome any similar co-operation they have to offer.

"We are already exchanging information with other manufacturers, and the spirit of ready co-operation they have shown has encouraged us to make this general appeal."

This MANAGEMENT LEAD Eliminates Muddle

THE success of the campaign for National Service must rely to some extent on the co-operation of business leaders. It is in the power of management to encourage enrolment of volunteers. The influence and example of executives is a key factor to co-operation of office and factory staff in such matters.

One of the best examples of constructive leadership by management comes from Bendix, Ltd., Birmingham. On the day the National Service Handbook was delivered, Mr. W. B. Lane, joint general manager of the company, broadcast through the firm's radio installation a short message to the works.

"The issue of the handbook," said Mr. Lane, "has set many of us wondering what we shall do consistent with our duty to the company."

He then announced that a committee had been formed to run an inquiry office which would answer questions on enrolment for National Service.

THE Bendix Company have made it clear that they were not applying pressure on or seeking to compel staff to "volunteer." The inquiry office will clear up doubts as to the best course for individuals to take.

In this the management are making an important and direct contribution to the success of National Service. Overlapping in enrolment will be eliminated. Both factory and local public administration will be in a position to

organize all available man-power. There will be no confusion in what the duties are for each man or woman.

If management in general would follow this example, most of the present muddle and indecision would be wiped out. Self-interest as well as patriotism calls for such organized effort.

Try Using this Work-Plan Book

EVERY company occasionally suffers from unexpected absence of key employees due to illness or accidents. Substitute workers are seldom familiar with all the routine of the jobs concerned.

To eliminate the loss of time on such

Remember—Those Job Hunters May Be CUSTOMERS To-day or To-morrow

PUBLIC relations" is a term with a wide meaning for department stores. Every year during the holiday season, stores, like many other firms, get many appeals for Christmas work. Some applicants are hired, but many more are of necessity turned away.

Realizing that these applicants and their families or close friends are, or may be in the future, customers of the stores, one firm last Christmas worked out a simple system of personal attention to retain the goodwill of rejected applicants.

Several days after Christmas, each

occasions, a good plan is to have all departments make up a book or folder of complete description and instructions concerning the work for which each executive and each department is responsible.

This system prevents work piling up awaiting return of the absent employee. Having everything down in "black and white" has paid handsomely.

One 'Bad Man' Executive Is An Asset

IN every successful organization there must be one hard-boiled egg with no respect for the feelings or temperament of anyone.

Somebody has to say "No!" Somebody has to fire the inefficient help; somebody has to growl when the office boy is five minutes late.

In short, every organization needs a disciplinarian.

Sometimes the top boss can detail this ugly task to an assistant. Sometimes the unwelcome burden is passed around until the secretary finds it on his shoulders. Being compelled to pay for all shiftlessness, he must check extravagance and inefficiency whether he likes it or not.

Let an organization lack such a man, everyone will soon be doing accounting in round figures, using engraved stationery for wrapping-paper, discarding pencils after the second sharpening—and the bailiff's men will be just around the corner.

It is sad but true that we all do better work if the whip is applied occasionally.

Wise men have observed that many slacken their pace to an imperceptible walk unless they are "reminded" now and then.

When I first became an employer I thought that everyone would respond to trust and kindness. I discovered that certain persons find it impossible to do the right thing unless they are sharply reproved.

My experience with debtors has been similar. Some people cannot bear to part with money until supplies are in danger of being cut off. Only then will they do what they might have done months before.

applicant received a postcard sent from the Personnel Department, which read:

"We regret very much indeed that it was not possible for us to employ you this Christmas. Our list of applications was very long and, unfortunately, we were not able to reach yours. We hope that another year we may be more fortunate, and thank you for your courtesy and your interest in offering to help us."

The cost of sending out these friendly messages was small, but in taking the sting out of rejection, this personal attention undoubtedly has retained or won an inestimable amount of goodwill from the job seekers and their families.

THE TREND OF TRADE

The Upturn Has Been INTERRUPTED— For How Long?

WHAT will Hitler's third shock to business confidence mean?

One answer lies in it being the *third*. Every successive shock toughens nerves and steadies resistance. Even so, executives are bound to mark time until the present situation becomes either stabilized or improved.

Whether a political war, economic war or compromise settlement is ahead in Europe remains to be seen. But it is certain that business cannot continue its upward trend so long as uncertainty remains. New ventures, expansion plans and luxury buying in the consumer markets will be interrupted temporarily. How long this hesitancy will last is a matter of politics.

New Nazi Aggressions Affect this Progress

UP to the week of Germany's fresh aggression, business conditions at home saw a continuance of the revival which has been gathering force since the September settlement. The reduction (142,000) in unemployment during February was much greater than normal; in February of 1936, '37 and '38 the decreases were 35,000, 62,000 and 17,000 respectively. Exports also rallied, even discounting the chance item of warships for Argentina and Greece.

Shop sales remained stable in January although retail prices had fallen by three points on last year. This is satisfactory but the recent trend of public buying cannot be assessed until we have the February figures.

Thanks to the operation of the new price list, steel outputs have soared. This rise is accentuated, however, by the fall in sales at the turn of the year when buyers were holding back to secure the benefit of the lower prices.

Rise in Building Plans Passed Is Encouraging

SURPRISING is the sudden rise in building plans during the month. I think the rise of 3.3 per cent over last year is partly due to the 5 per cent rise in building costs. But admitting this, the downward movement of past months is now arrested. Plans passed in Scotland were phenomenal, rising to three times the average for 1933 and assisting toward the encouraging rise in our *Business Activity Index* for that country.

Other evidences of the renewed upturn are the continued strength of car sales, the success of the British Industries Fair and the increase of 8.8 per cent in the electricity output.

Only in shipbuilding, cotton and

By

CECIL CHISHOLM, M.A.
'BUSINESS' Economist

coal are there no signs of improvement. The number of merchant ships on the stocks is now only 61. Indeed, merchant shipbuilding is coming once more to a standstill in this country.

Three Factors Key To Shipbuilding Decline

HERE again the question is one of costs, of too expensive raw materials, coupled with a too rigid wage system. As things are, Holland, Scandinavia, Italy and America are running away with the world's shipbuilding while our own yards stand empty. There is no effort to reduce drastically raw material prices, management or labour costs, whatsoever the inconvenience to the shipbuilders themselves. Subsidies are no more a satisfactory cure for their plight than for the cotton industry since they, too, are largely dependent upon foreign markets for a profitable volume of business.

The fall in imports of raw materials stresses the disastrous condition of the cotton industry in particular. Neither the Enabling Act nor the two new proposed price agreements will help Lancashire to fight Japan. Her 40 per cent handicap in price can be offset only by cheaper production (attainable by modern equipment) closer costings and the reduction of transport charges between processes.

Cotton Industry Neglects These Important Markets

A FEW individual firms are going far to make these necessary

economies. Unhappily this does not affect the general low level of efficiency throughout the industry. Lancashire is surely thinking too much of the protected home markets—which can never use more than a fraction of her output—and too little of the slightly protected Empire, of the open Eastern and foreign markets in which price alone decides.

To get back to the general situation it is clear that the new European upset has suddenly stayed our business upturn. The interruption is serious for three reasons: (1) the definite breach between democratic and totalitarian states; (2) the absence of any possible mediator in Europe since Mr. Roosevelt is one of the leaders of democracy; (3) the economic war of sorts already existing.

Already America has applied a 25 per cent tax on all German goods, treating her virtually as an unfriendly state. Already France threatens a similar boycott. Already the intensification of this economic war is advocated by no less an authority than Sir Walter Layton in his Press.

This Would Happen Through Trade War

AN economic war between the democratic and the totalitarian states would include an embargo on all German and Italian goods here and on British goods in these countries. This would increase prices of some boycotted goods through shortage of supplies. At the same time food prices can be expected to rise through the Government's expeditious accumulation of food reserves. This in turn would confine many British bottoms to the transit of food and essentials, which in turn would raise freights, and prices of non-essential imports. And at this point a

THE upturn in British business activity was continued last month.

While, as Mr. Chisholm points out, Hitler's latest aggression has interrupted the upswing, business is becoming inured to these shocks.

And these key figures, for instance, encourage a more cheerful outlook than might be expected.

142,000 reduction (February) in unemployment

143,000 rise (February) in employment

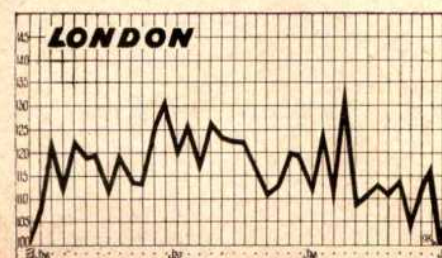
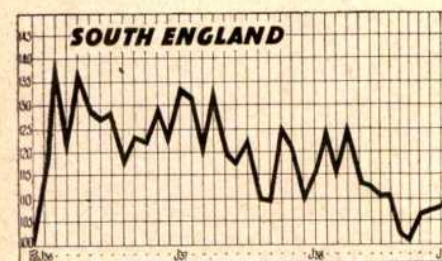
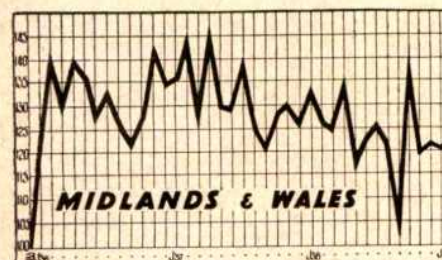
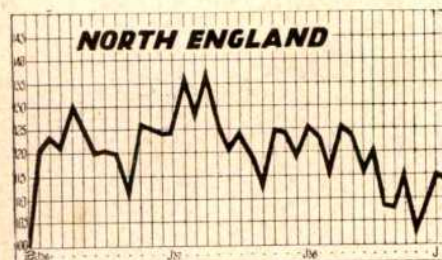
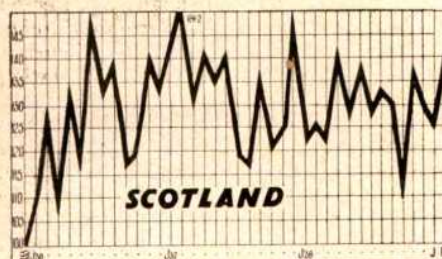
Retail Sales stable

Steel output up 169,400 over figures of a month ago

Building plans up 3.3 per cent over figures of a year ago

REGIONAL ACTIVITY

Study these graphs. They show the level of business activity in every area of the U.K. and provide a guide to the trend of business from a long-term viewpoint.



little private profiteering might be expected.

Britain is in a strong position for economic warfare, through our financial and Empire resources. Presuming that an economic war operates, what would we lose? In 1938 the totalitarian states took 5.57 of our exports and we took from them 4.07 of our imports. During the same year, France, Russia and the

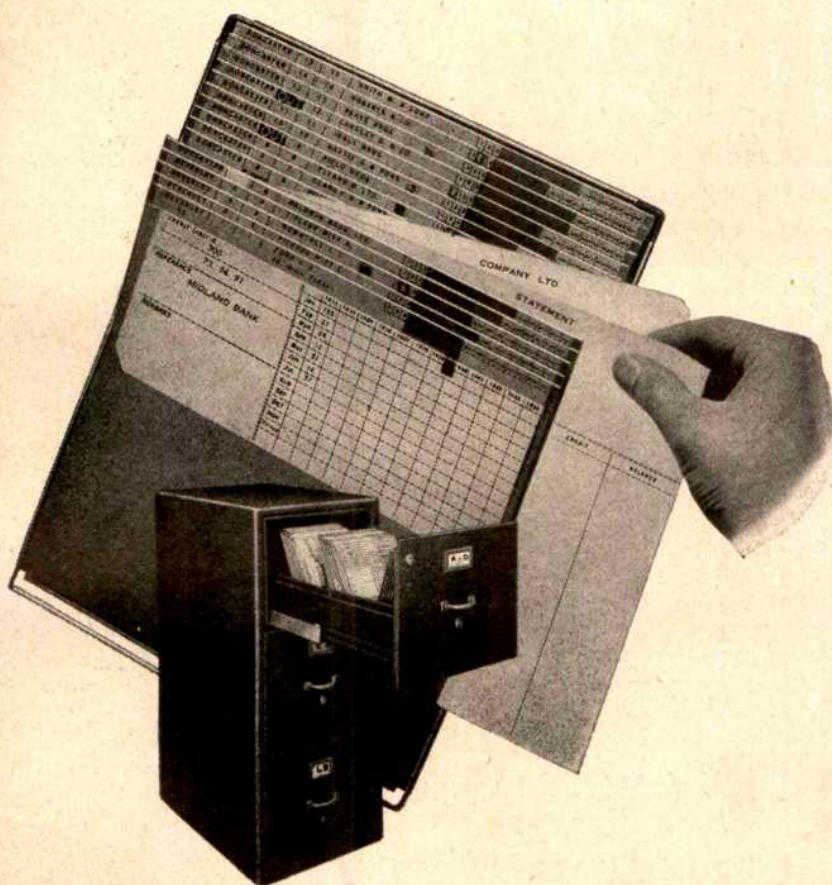
U.S.A. alone bought 8.93 of all our exports, while we took from them 17.5 of our imports. In other words trade with these democracies is more than 50 per cent greater than our business with the totalitarian states. Our aim would be to secure from the wealthy American, South America, Scandinavia and Empire markets business which we have lost from the totalitarian states.

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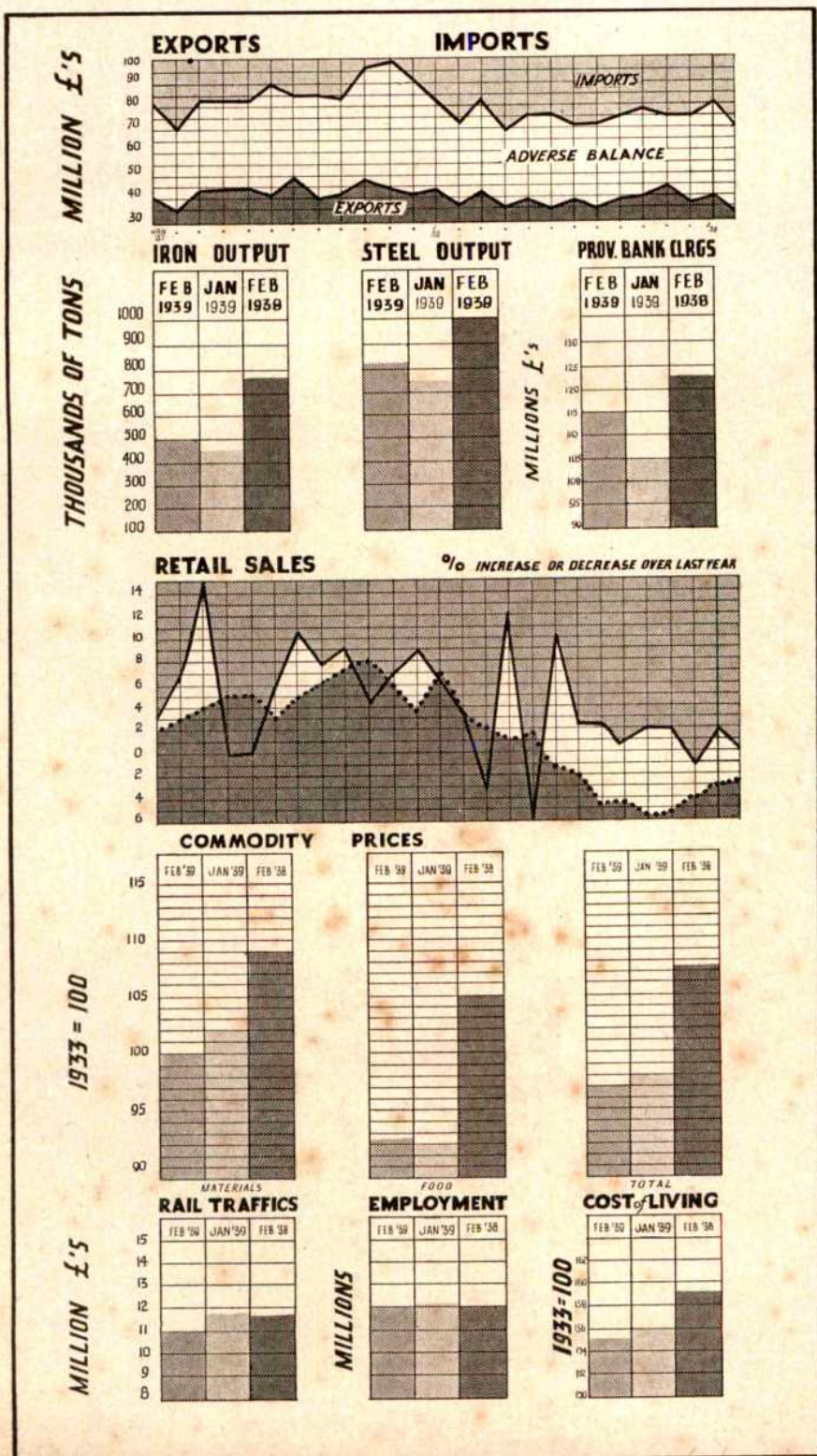
German's Czech Grab Yielded These Arms

MEANTIME Germany increases her assets. Her *coup* gave her overnight the full results of one year's intensive rearmament by this country: 1,500 first line planes; equipment for 40 brigades; masses of heavy artillery. She has obtained £17.5 million of gold, £10 million in currency; the Skoda and

Bryno and 29 other small armament factories. Also the Bohemian and Moravian black coalfields, iron ore, the large glass, china, cotton and wool industries. How definite an increase in her economic power these assets represent, it is impossible to say. None knows to what extent Germany was already able to control the industries of Bohemia and Moravia.

GUIDING FACTORS IN THE TREND—

All comparisons are with similar month in last and previous month in this year



Clearly the Reich will be able to overcome its temporary famine in gold and in currency, to increase its food supplies and to improve its export possibilities in the narrow markets left to-day in South-Eastern Europe and the East.

It will lose its share of American, British, Empire, French and Russian trade. Conceivably it may lose some part of its Polish, Rumanian and South American business. On balance, Germany's strategic and economic gains will be offset by considerable losses.

Fall In Prices Of 'Raws' Affects Empire Markets

THE Empire market continues to suffer from the fall of raw material prices. In Canada there is a further decline in industrial employment. In Australia the decline in export income is beginning to affect internal trade, but the end of the drought has brightened prospects for crops, stock-raising and dairy farming. In India the depression shows signs of being shorter.

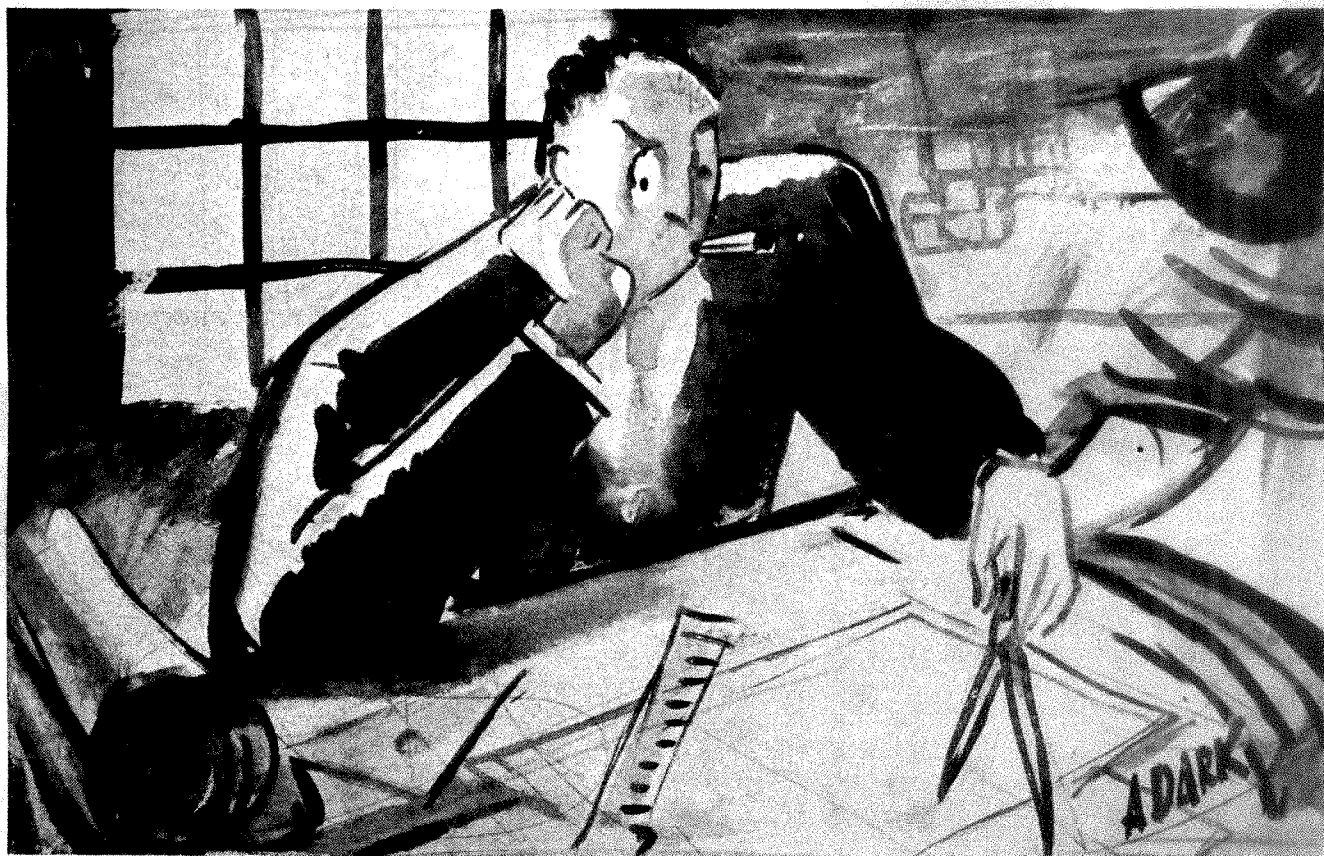
In Europe, Germany, Italy and Russia function at high pressure within their insulated economies, with low profits for industry, low wages for the worker and no rewards for enterprise. In France employment is rising slightly. Car sales are up 30 per cent; steel output is fractionally up; textile production has improved by 10 per cent; industry is getting into gear again, since the five-day week and other cramping Blum legislation has been modified.

These European Tensions Hold Back U.S. Revival

IN America the revival still fails to materialize conclusively. The President's "Business Appeasement" campaign is uncertain. Steel output is gradually reviving; volume of building is increasing; motor production is up 60 per cent over last year. The United States Treasury continues to pour out money steadily on its social programmes. Only European tensions seem to prevent a widespread revival.

While German aggression is having these effects on the United States against the condition of uncertainty and foreboding in Britain must be reckoned the stimulus that is already added to some trades and to certain classes of purchasing power by the acceleration of armaments.

Last month we stated business activity was good, enterprise not good and confidence bad. This month intensified lack of confidence has overwhelmed the first two. But while this is not the time for speculative commitments or carefree expansion, those businesses whose executives are meeting the situation vigorously will maintain prosperity. This is a time for strenuously guarding every steady line of business; for giving the sales force exceptional backing and encouragement and for trimming costs all through the business while impairing the structure as little as possible. This policy is difficult, but not impossible, to execute.



Designing your new factory

There is little relation between the design of industrial buildings being erected to-day and the factory of a few years ago. Modern constructional principles and modern building materials provide the designer with a new method of approach. Industrialists know that if a factory is to work efficiently, its design must be based on an accurate analysis of its purpose. It must be designed by an architect who understands manufacturers' problems.

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and Construction. Building suggestions and estimates will gladly be submitted for any schemes you may have in mind.



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How We RAISED SALES 100 Per Cent in 18 Months



THERE are some business policies which are worth following irrespective of economic and market conditions. Among them is that of enterprise, a policy easy to follow in prosperous times, somewhat difficult in periods of recession or slackness.

Yet frequently firms have proved that enterprise pays best when external conditions are unfavourable. There are several reasons for this. Enterprise is, for example, a positive force; it means *attack*, not defence. It is cheerful, aggressive and reassuring. That is why retailers and public alike respond to the firm which is enterprising.

Some of the effects of enterprise are intangible. For instance, the feeling of confidence which an enterprising firm spreads cannot always be measured nor put down to any one factor. Yet there is no doubt as to its value in stimulating business; rising sales provide evidence of this fact.

This has been the experience of Campbell's Soups, Ltd., during the past year to 18 months. In that time their sales have risen by over 100 per cent and are still rising. To date this year the increase over the comparable period in 1938 is around 150 per cent.

Five Key Factors Behind This Successful Drive

The reasons behind this phenomenal increase are explained by the policies of the firm. Let Mr. H. W. Adams, managing director of the company, explain it in his own words:

"The fundamental reason why we have made such progress is, of course, the soundness of our product," said Mr. Adams. "We make and sell a quality product. We know it is good and that customers will be satisfied.

"Our policies can be summed up under these heads: (a) selling effort directed at making as close contact with consumers as possible; (b) service to and co-operation with the trade; (c) maintenance of fixed prices for dealers,

While 'lack of confidence' left other firms timorous, this company made bold plans and acted vigorously

They used the key policy to business success—**ENTERPRISE**

Supporting policies were:

- (a) *Contacting consumers as much as possible*
- (b) *Close co-operation with the trade*
- (c) *Maintaining fixed trade and retail prices*
- (d) *Concentrating on sales in selected areas*

How these aims have helped the company to achieve an outstanding success in a highly competitive market is told here in an interview with

H. W. ADAMS,
Managing Director,
Campbell's Soups Ltd.

irrespective of the size of orders; (d) building up business by concentration on selected areas.

"Perhaps the most important of all, in a broad sense, is the confidence we have in our ability to make progress," Mr. Adams continued. "That comes chiefly from concentrating on the job in hand. For instance, we have not allowed this 'lack of confidence' so much talked about to upset our plans nor undermine our determination and belief that a bigger volume of sales can be obtained by those who work hard enough."

It is this refusal to be depressed by current unrest, this determination to pursue business with vigour and enterprise, that has given Campbell's sales curves a steep upward sweep. They take the view that their chief interest is in making more sales, not in following the latest political news or economic prophecies. And if the consumer is influenced by such events and is shy of going to the shop to buy goods, *then the thing to do is to go after the consumer.*

This they have done with success, guided by those policies outlined by Mr. Adams. Let us now examine them and the methods used.

Some manufacturers are content to advertise heavily, distribute their goods through the trade, supply some window and other display material and let the job go at that. Campbell's have a different viewpoint. They believe the manufacturer should do a real selling job.

In formulating a plan of selling it is always useful to have among your executives men who have long experience "in the field." Mr. Adams, for instance, has spent many years in active selling. His experience, especially in marketing foodstuffs, has shown that direct contact with the consumer through sampling, exhibitions and so on is one of the most effective methods of getting sales.

Campbell's marketing plan has made full use of this type of selling. Samples have been distributed in their thousands through cinemas, dance halls, theatres, exhibitions, local shows, etc. For instance, one arrangement was made for a week's publicity through 14 dance halls. On an arranged "gift night" the first 250 people to enter each hall were each given a tin of Campbell's soup. This effort was tied up with poster displays, show-cases outside the halls, window and counter displays by local dealers and the distribution of leaflets and other advertising material.

Why House-to-House Canvass Was NOT Used

House-to-house canvassing has *not* been used for several reasons: (1) Real control over distribution by such methods is hard to maintain; (2) it is difficult to check the value of each canvasser's work; (3) often the housewife resents the canvasser's call, as she (a) does not want to be bothered as she is busy, and (b) she is suspicious of the aims behind the free sample.

On the other hand, when women

S.P.B. Mais

speaking ..

Are you on the Telephone?

"It's an absurd question, isn't it? It is difficult to imagine how business houses ever got on without the telephone.

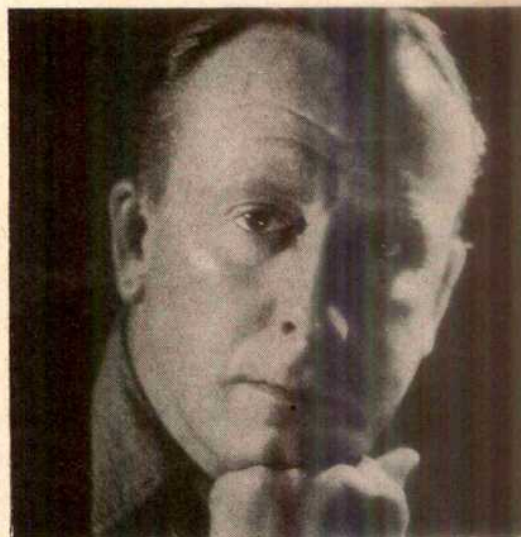
"Yes, but how long was the machine invented before the old-established business houses acknowledged its existence?"

"Very soon it will be as silly to ask 'Have you a Remington Electric Accounting Machine?' They are almost as indispensable as the telephone, but man is a contrary animal. He fights, and fights hard, against any innovation.

"I write several millions of words a year, and yet you'll find me still sitting at an old-fashioned desk littered with papers, writing everything out in longhand with an old pen. I know that in the end I shall have the sense to type and to dictate into a dictaphone and thereby increase my efficiency, conserve my energy, and at least double my output, but I keep on putting off the good day.

"Do you? If so, why?"

S.P.B. Mais.



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LEDGER POSTING
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BRANCHES IN ALL PRINCIPAL CITIES.

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REMINGTON

ACCOUNTING MACHINES

are out shopping, sightseeing or for pleasure, their attention can be obtained freely, and a sample can be handed to them without arousing hostility or suspicion. For example, men and women are freely induced to taste soup that is prepared on the stand



Samples distributed from display stands at exhibitions, etc., have played an important part in Campbell's success. It is a policy that has paid a hundredfold (see text)

demonstration at an exhibition. Similarly, at dance halls, cinemas, and so on, they are in the mood and pleased to accept a "prize" or a "gift."

Although Campbell's distribute to the trade through wholesalers, they maintain close personal contact with retailers. This, indeed, has been a factor in their success.

There is one point about the firm's relationship with dealers which might

the company. That establishes mutual trust and leads to ready co-operation in sales plans.

Another important factor is the maintenance of strict price policy and control. Campbell's soups retail at 6d. a tin. The dealer's discount is fixed irrespective of the amount of an order. The little dealer, therefore, is on equal footing with the big store. He knows that competition is fair, that no cut-price practice can be followed with success. Buying in quantity does not allow any extra profit per tin, therefore the edge is taken off "cutting." Stunt selling has no place in Campbell's sales policy.

As the company's relations with dealers are on such a sound footing, they stand well in the regard of wholesalers. These firms profit from the goodwill gained and, naturally, are willing co-operators in schemes for business development.

Advertising campaigns have been closely tied-up with selling effort. The policy of concentration on selected areas such as London, Bristol, Leeds, the North-East Coast, and Scotland, has been supported by Press advertising. For instance, space has been taken regularly during the "soup (winter) season" in the London evening papers, *Yorkshire Evening Post*, *Manchester Evening Chronicle* and *Evening News*, *Liverpool Echo*, *Bristol Evening World*, *Newcastle Chronicle*, *Aberdeen Evening Express*, *Edinburgh Evening News*, *Dundee Telegraph*, and *Glasgow Evening Times* (see illustrations).

Some national advertising has been done in the *Sunday Pictorial*, the *Daily Express* and the *Daily Mirror*. This has given the support necessary at this

in quality and quantity of Campbell's soups has been emphasized. This, with the theme, "a meal in itself," has been an active factor in bringing about the 100 per cent sales increase. And the company is heading for another big increase in sales for 1939.

This Story Should Interest Your Salesmen

THE story is told of the persistent salesman who never could "thaw out" a prospect who received him politely but not cordially. Observing that the prospect was a student of philosophy, the salesman forced himself to absorb information on that subject until he could converse intelligently. Using this common interest, he soon found his prospect warming up. A real friendship began, and business followed later.

It is a human trait that everything else being equal, we are kindly disposed toward our friends. Incidentally, the salesman obtained a liberal education in an absorbing subject, besides getting business for his firm.

Standardized Displays Help Cut Costs

INCREASED sales and substantial cost-cutting by a manufacturer of foodstuffs has resulted from a scheme of limiting and standardizing dealer window-display material. Cost and amount of display matter have been reduced by over 16 per cent and about 80 per cent of dealers have used the new material. Sales have risen by more than 4 per cent.

The basis of the scheme is classification of windows. Size of window and grade of shop are the key factors. The manufacturer has analysed windows into four main sizes and shops into three grades. The new display material is now planned according to this analysis. For instance, top grade, biggest windows get the best displays, smallest windows of "C" grade get the cheapest displays, and so on.

In the past this firm, like so many others, distributed cut-outs, stands, posters, and other counter and window pieces without adequate check on their suitability or how much they were used. Much of the material was simply thrown into the wastepaper-basket. The very small dealer in a low-class neighbourhood often threw it away because he had no window space; the big dealer in a high-grade locality would not use it because the windows had to be dressed carefully and the material was unsuitable or not good enough.

As the manufacturer could not cater for all needs, he took up this standardization scheme. By this means he has met adequately the requirements of every class of dealer on his books. He has, too, been strict in distribution of material. Only those dealers who sign an order for pieces and agree to display them are served.



All advertising has stressed the two points (1) quantity, (2) quality. This 'double quantity, double value' theme has been used a lot as the main appeal; in every case it has been stressed in the text of advertisements

be noted with profit by other manufacturers. Campbell's always keep a promise made to the trade. For instance, if an order is promised for delivery on a certain date, the goods arrive on time and in full quantity. Similarly, promises about display materials, special displays, etc., are kept strictly.

Policy of this kind has lasting good results. Dealers know they can rely on

stage to dealers outside the London and selected provincial areas.

The trade has not been overlooked in advertising. Prior to the launching of the general advertising campaign explanatory announcement of plans have appeared in the *Grocer*, the *Grocer's Gazette* and the *Scottish Trader and Grocer*.

In all consumer advertising the value

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Billing necessitates the use of some kind of business stationery. Billing *Plus* can be achieved by the use of PRIMUS Continuous Forms. For Primus, in addition to ensuring accurate billing, gives you these advantages :

by

PRIMUS

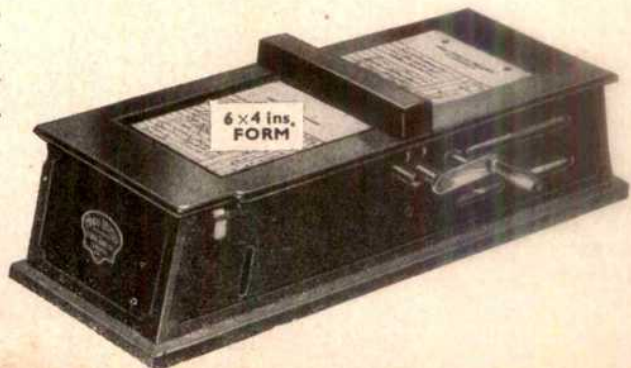
- The rapid, smooth feeding of forms to the machine via the PRIMUS attachment, saves ONE hour in THREE of the operator's time.
- The elimination of all non-productive tasks, such as interleaving of carbons, insertion and aligning of forms, alleviates routine monotony and so reduces fatigue to a minimum.
- All the necessary instructions to do with the completion of an order—stock requisitions, works orders, shipping instructions, etc., as well as invoicing—can be produced AT ONE WRITING.
- The PRIMUS attachment facilitating a smooth flow of work, fits any standard typewriter or billing machine. No specifically-trained operator is required.

FOR HANDWRITTEN RECORDS the PRIMUS Autographic Register for use with Continuous Stationery ensures the same speedy, smooth operation, while a copy automatically locked in the machine provides your auditor with a check on each transaction.

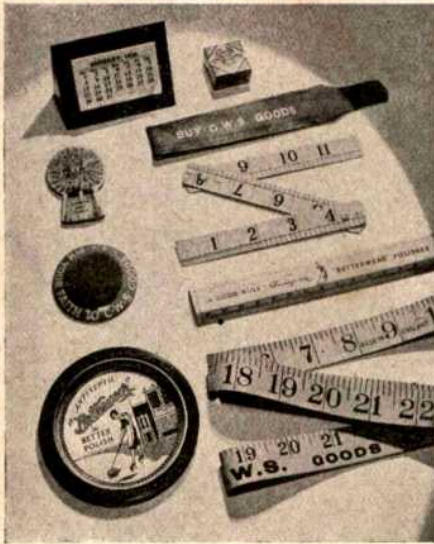
Carter-Davis Ltd.

Queen Elizabeth Street, London, S.E.1

Telephone - - - - - HOP 0204-5-6



IDEAS and METHODS that BUILD SALES



Here are a few little gifts for children. They have been used effectively by C.W.S. and Betterwear to get the firms' names into the home—an idea which many manufacturers could use with success

This new tin for MacLean brand stomach powders (illustrated below) has been designed for consumer convenience. It is important that medicinal tablets, particularly those to be taken during the day, should be packed in neat containers for carrying. In this new pack the tin is even thinner than the average cigarette-case. (Both C.W.S. gifts and the MacLean pack were made by the Metal Box Co. Ltd.)

Concentration On Good Dealers Is Way To Increased Sales and Profit, Lower Costs

MANY manufacturers waste effort and money by having *too many* dealers. A case in point is that of a radio manufacturer who, on examining his 4,700 accounts, found that 75 per cent of his business was done by 1,300 dealers. Of the remaining 3,400 retailers, 800 did so little business that their accounts meant a loss to him. The cost of salesmen calling on them, the expense of display materials and deliveries, etc., were out of all proportion to the sales.

These 800 were taken off the regular list for calls, displays, and so on. They were asked to post their orders.

About 1,000 of the 2,600 remaining dealers were accounts hovering between non-profit and a small profit. Salesmen's calls on these and the provision of other services were cut down drastically.

Concentration Put Sales Up By 28 Per Cent

This left the sales staff with much more time to concentrate on the 1,300 very good accounts and the 1,600 promising accounts, which has enabled the manufacturer to increase sales by 28 per cent in the past four months. The good dealers have responded to the additional help and service provided.

The savings effected by the scheme amount to more than 20 per cent, which means that the firm has made a two-way gain—a cut in costs and an increase in sales.

This is the sort of campaign that could be used with success by hundreds of manufacturers. Have you examined your dealer accounts in this light? If not, perhaps here is a chance to make sales progress and cost reduction this year.



'Double-Team' Idea TREBLED Sales And Cut Costs For This Firm

A "Mr. and Mrs." idea has enabled the Colfanite Products Company, Inc., Seattle, Washington, to treble sales and decrease sales costs in covering the smaller towns of its west coast territory.

Like many other products, Colfanite sales soar when its uses are demonstrated at the point of sale. Placing permanent demonstration booths in large department stores and other types of stores in metropolitan areas has worked very well. It continues to be one of the prime ways sales are stimulated in the population centres. But—the stores in the small towns could be covered only occasionally by demonstrators because of the sales expense involved. The sales sag. Seven demonstrations became a factor which needed attention, for Colfanite had over eight hundred of these small town outlets to consider.

And then the "Mr. and Mrs." plan was evolved by A. H. Kinney, sales

This Display has almost 100 per cent Appeal

AN advertising novelty with an almost 100 per cent appeal to their dealers is being used by the B.S.A. cycle company.

A B.S.A. bicycle chain wheel made for racing machines has sixty teeth. Mr. J. W. Bryan, the sales director, thought of using the wheels as clock faces for dealer display purposes.

The wheels are now chromium plated, and every fifth tooth is picked out in pastel blue to indicate the hours. Electric clock movements, giving seconds as well as minutes and hours, are fitted. No extraneous advertising matter is used to spoil the effect. The letters "B.S.A." are incorporated in the standard wheel design.

Dealers find that the wheel clocks are an outstanding attraction and that some customers, thinking they are free, want them.

'Manners Maketh Sales'

Americans in London always remark the "thank you" when you buy a newspaper, pay a bus fare, enter a lift, or write your name in an hotel register.

The "thank you" spirit is less common in America; in fact, it is so uncommon that efficiency experts frequently recommend it as a device for attracting favourable attention to an enterprise, such as selling a newspaper or operating a bank.

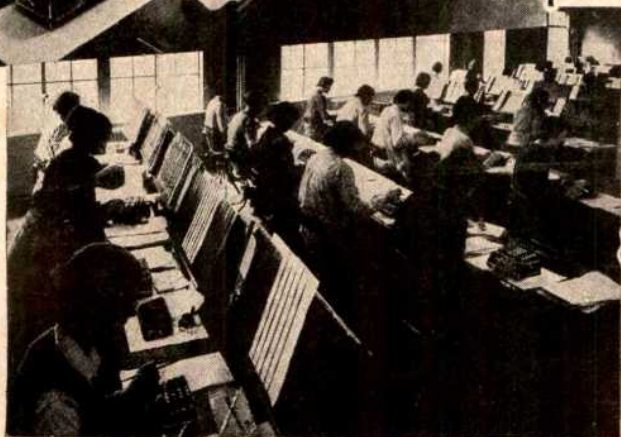
Because the "thank you" is so infrequently heard over there, it has an unusual goodwill value.

In any country good manners will often sell goods when cheapness and quality fail to move them.

director. Instead of hiring a salesman he hires a salesman and his wife—a trailer couple. The Mr. is the salesman and the Mrs. demonstrates in the stores. They live and travel about in a trailer which is also a promotional magnet for the product.

Because sales trebled in the territory covered by the first trailer couple, another trailer pair has been added to the staff. The "double team" idea will be continued, says Mr. Kinney.

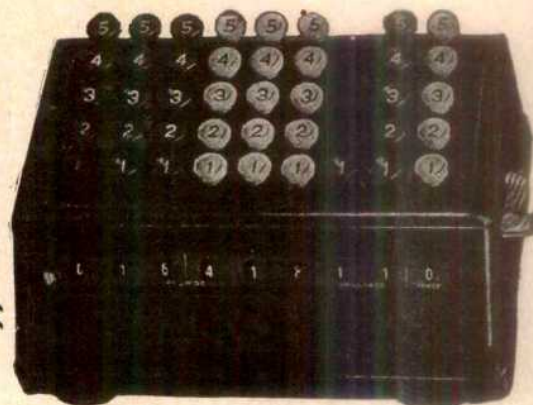
The plan is self-liquidating. The average small town dealer has sales cost at approximately 20 per cent. Accordingly, he is perfectly willing to pay the wife a 20 per cent commission on all sales she makes during her demonstrations, and the husband the same per cent for wholesale business which he uncovers. They also receive regular commission on all merchandise shipped into a territory, there being from 100 to 150 active dealers in a territory.



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How you can Use the Office to INCREASE PROFITS

OUT of a total in round figures of 134,000 manufacturing concerns in the United Kingdom no less than 130,400, or 98 per cent, are "small" businesses whose office work seems just another "overhead" to be covered. But is this true?

It used to be said of the Chicago canning factories that they made a profit out of every part of the pig but the squeal. No doubt even that provides a record of "noises off" for the radio now. And in like manner the director with vision can make profitable even the office "overhead."

It sounds like a contradiction in terms but is nonetheless possible, and if truth were known the odd two per cent of large firms owe their ascendancy to the discovery of how to do it. For, after a firm has got an order, the handling of it by the office decides, more often than not, whether "repeats" will follow.

Characteristics of 'Top Line' Office To-day

The office as the go-between amongst salesmen, technical men, producers, and distributors must have character; only character will register the firm name with the customer "for keeps." Attractive personality of the office as of the individual comprises (a) distinction, (b) speed in getting off the mark, (c) being well informed, (d) being correctly turned out, and (e) being accurate and prompt. The means of attainment of all these features requires considered method and perhaps some rational mechanization.

Let us now examine the practical experience of a number of firms.

'Distinction' Increased Business By 20 Per Cent

The best example that comes to mind of the pull exercised by distinctive presentation is the experience of a firm which installed an electric typewriter. This machine was capable of turning

By C. H. COSTELLO,
A.I.C.S., A.C.W.A.



Inter-communication systems can save anything from 20 to 40 per cent of an executive's time. They offer one constructive way to 'make the office pay' (see text)

out from a master copy two hundred "individual" circular letters a day, with specially inserted paragraphs as required. Whereas the ordinary type of duplicated letter breathed "mass appeal" and an air of "we'd like your custom but think one half-penny and a halfpenny stamp is all the effort to get it is worth," the individually typed letters, sent as first-class mail, became important and exclusive offers. They brought a 25 per cent response, as compared with the 5 per cent previously recorded.

Again, a certain firm of wholesale timber merchants held a huge stock of Siberian pine at a time when this class of timber was not very popular. To bring home to prospective buyers the quality of this timber they had a large quantity of notepaper specially pre-

pared which incorporated a very thin shaving of the wood in its make-up. It needs little imagination to understand how this pinewood paper, with its neat and distinctive sales offer, appealed to the timber merchant. The whole stock was shifted in record time.

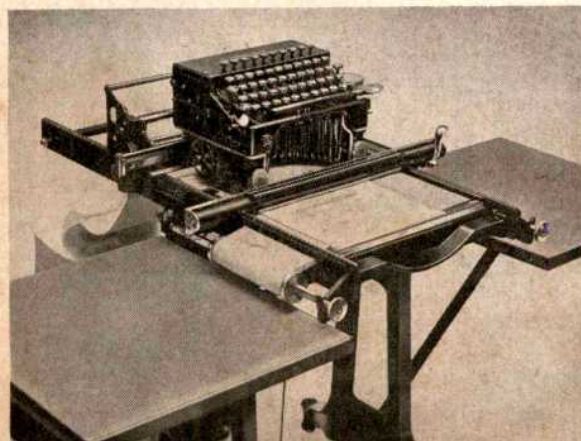
These two examples show how rational mechanization used in the office to promote profits, and the considered method that is different, can singly or together achieve distinction.

Getting Off The Mark Means Profit

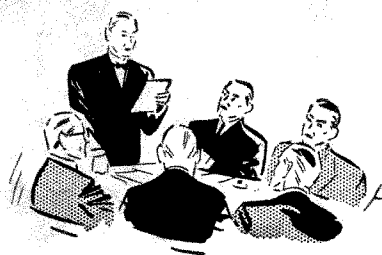
In all firms having a large daily volume of orders, until the morning mail is opened and distributed, the regular daily work cannot begin. This means that the first hour may be virtually lost if no special arrangements are adopted. This lost hour represents $12\frac{1}{2}$ per cent of an eight-hour day, which means that for each group of eight clerks a day's work is lost.

A rigid and complete plan for mail-opening routine, arranged to get the entire staff to work punctually will avoid this wastage. Moreover, getting off the mark early may mean prompt delivery and the reputation which goes with it. Here again saving of office costs means profits.

Although in the small office the mail is proportionately small, the number of people handling it is also small. But it is just as important to save time as when the mail comes in by the van load. For handling a mail of 100 to 200 letters



An Underwood Elliott Fisher automatic feed machine handles all continuous stationery of various widths, including card or other related records. Available with or without adding-subtracting registers



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a small manual letter-opening machine is recommended. For any volume over 200 an electric machine should be used, not to save energy but time. The best electric cutting machine will take a thin sliver from the end of each envelope at the rate of 600 letters a minute.

Inter-Communication Systems Save 40 Per Cent Time

Brief consideration will show that the executive needs principally (a) to be able to contact his subordinates on the instant, (b) to confer with his colleagues with as little formality as possible, and (c) to secure information to enable a telephone call to be effectively dealt with. Doing these things without the aid of some inter-communication system means a *daily loss of from 20 per cent to 40 per cent of his time.*

How does this office feature affect profits? Firstly, by loss of constructive work time; secondly, because to the outside public the firm when contacted is

tion much more readily, thus goodwill is promoted. Both customer and firm are "well informed."

The product of the office so far as the outside public is concerned is the letter in its envelope. And the envelope correctly turned out is suitable in form, properly addressed and duly sealed and stamped or franked.

Where one's customers are mainly business firms having a central mail-opening pool, window envelopes save much typing work and are wholly acceptable. To the private individual a window envelope portends a bill. Ordinary letters therefore create the best impression if enclosed in the orthodox type of envelope. Similar considerations determine the respective merits of franking and stamping.

The envelope may be addressed by typewriter or addressing machine, according to frequency of communication. Wherever possible the time-saving qualities of the addressing machine

course, once the essential simplicity of the machine method is recognized such objections are dismissed.

Reduced to essentials, the hand method involves *separate* hand-written records for order, requisition, invoice in duplicate, day book and ledger. Monthly balancing and the dispatch of statements is a formidable task.

Machine Methods Cut Time 75 Per Cent

Contrast with this the *simultaneous* machine production by billing machine of invoice, ledger copy, traveller, statistical and all departmental copies as well as receipt and delivery note. The ledger copy is posted by machine, which in one copy posts it to a duplicate statement ledger account, and automatically throws out a new balance after each posting, giving a total amount of documents posted. This is agreed with a predetermined total for the day. The monthly work involves no writing and no addition. Consequently the statements can be got out in a *quarter of the time* required for hand methods.

Correctness throughout continuously featured gives a reputation for business-like accuracy and promptness. Travellers can collect right from the beginning of the month. This, of course, leads to improved financial position and greater liquidity of cash. Office costs turned promptly into cash profits!

Stock Control Easy This Way

FORMS in use by department heads in a big store in the North are an aid in visualizing stock of merchandise on hand, on order, and quantity of goods needed.

First, a "model stock" is set up for each department, and the department head sees that stock is kept at this figure. Ordering then becomes a simple matter of taking a daily inventory (from the previous day's sales checked against stock on hand) and ordering the difference between this figure and the one representing the "model stock." For example, if the department has found on a certain brand tyre that the stock should be fifty items, and the inventory shows the number on hand to be ten, the number to order automatically becomes the difference, or forty.

Easy To Keep a Form Up to Date

A form, used by each department, showing the item, the retail price, the model stock, the amount on hand, and the amount to order is easily kept up from day to day.

Correction

In the article on page 40 of the March issue of BUSINESS reference was made to Sieray Q.H. Electric Discharge Lamps. By error the lamps were referred to as "O.H." The type is, of course, "Q.H."



Save time by using dictating machines on correspondence work. There is a special feed equipment for continuous letter-heads. Punched holes for automatic positive - alignment feed can be seen along the margins of the forms. Time, labour and other costs can be cut by 30 per cent

not fully awake. Immediate response is lacking; the impression of slackness is fostered. The business does not expand as it might because it is not "on its toes." Decidedly, the office profit of such an installation will balance the office cost involved.

Cut Costs, Speed Service By Using Telephone

Turning now to method rather than means, the telephone for outside communication may be used to cut down very considerably time spent in correspondence. And by obtaining a definite result immediately it speeds up business to an extraordinary degree.

Comparing costs, the average output of a typist is from three to four medium-length letters an hour. At 1s. an hour each letter costs 3d. for typing alone. Paper, duplicate copies, cost of ribbon, envelopes, etc., add at least 2d., and there is postage at 1½d. We have then to allow for the executive share—dictating, reading over and signing. Consequently 1s. is the conservative estimate of the cost of a letter. The telephone charge is but a penny or twopence, and the time spent on talking is less than that taken in dictating a letter and reading the reply.

Cordiality and the spirit of prompt service can be infused into a conversa-

should be utilized. One hand-operated machine is able to equal the output of 15 typists.

As for stamp-fixing machines, five are performed at one time by the stamp affixer—picking up, moistening, severing, affixing and counting. Letters and parcels up to 2½ in. in thickness are dealt with at the rate of 60 a minute, and the machine counts the number of stamps as it goes along.

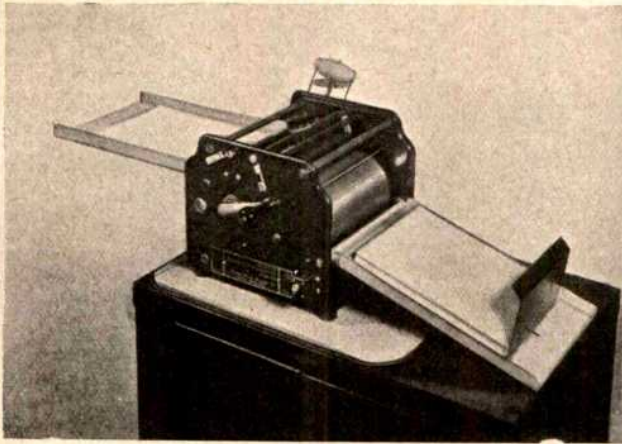
For small firms having sufficient mail for franking there is a hand-operated machine designed for just their needs.

The logical question is: How do profits emerge? The truth is that with such machinery available no office can afford hand methods.

For instance, in sealing and stamping by hand, the only real check on expenditure is by a triple count of envelopes, stamps and stamped envelopes. This is responsible and expensive clerical work. But no loss can occur when each stamp is issued from a locked compartment or is franked and in each case is mechanically accounted for. The machines save salaries and speed up output. They enable lower-grade workers to be employed, and they defeat pilferage.

Mechanical accounting to the uninitiated suggests that the delays and mistakes of hand methods must be perpetuated and intensified. Actually, of

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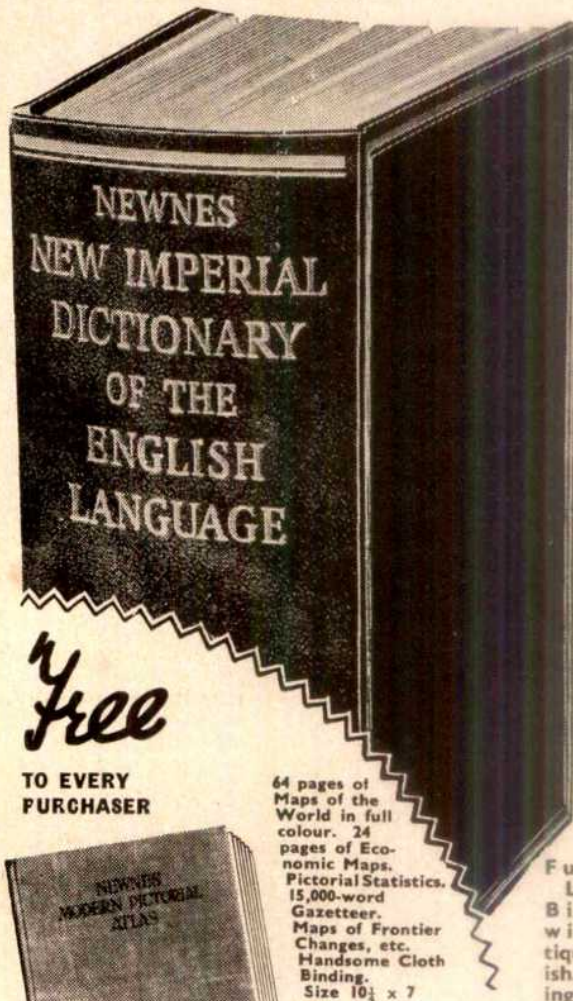
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SAVE Time and Worry every day—with 'SYSTEM' Desk Calendars



Use a System Desk Calendar yourself—place one on the desk of every important member of your staff. See from the accompanying illustration how simply this unique device operates—and yet how complete, automatic and accurate is the service it renders you. At the top stands the day's date in large type; below it, an appointment sheet for the day marked off by hours and half-hours; then comes a convenient Calendar for the current, past and next months; below is a big sheet for the day's memos, notes and reminders; there is one of these large sheets for every day of the year, giving ample room for all records. As one long-time user says, "It is the one indispensable desk assistant for every business man."

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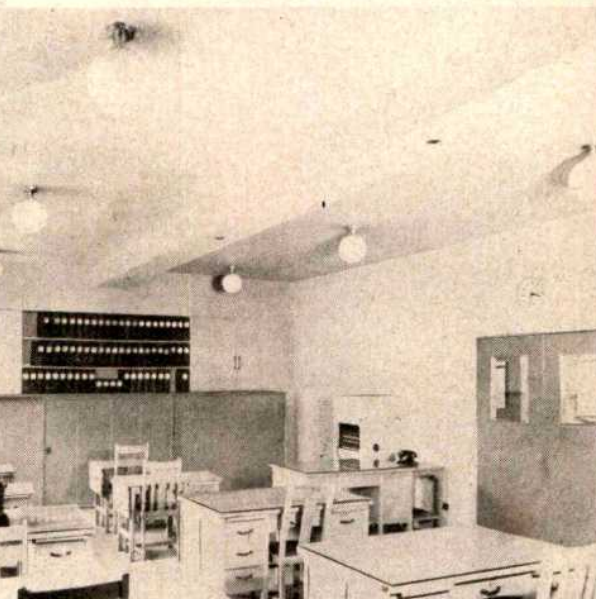
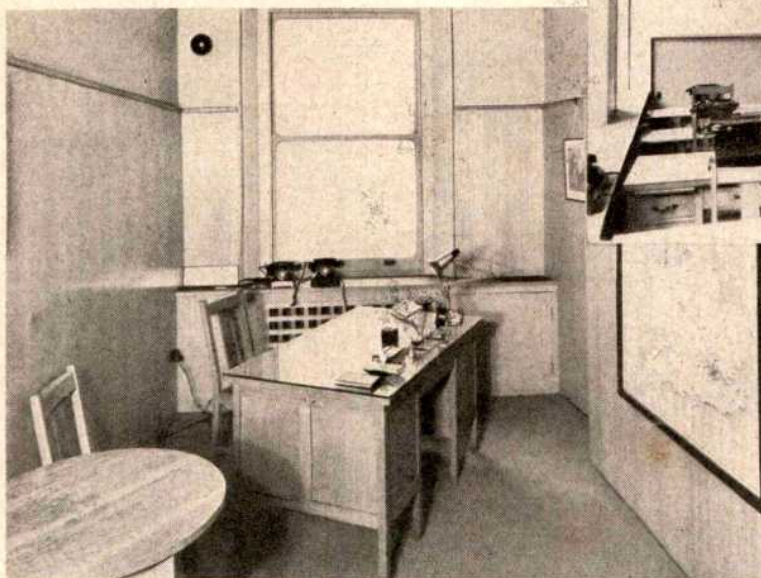
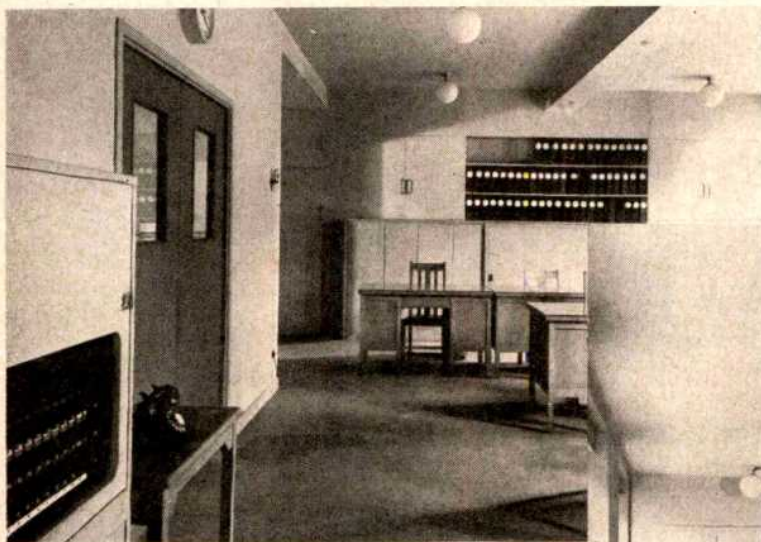
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**POST
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FOR FREE
BROCHURE**

This Office is a PROFIT MAKER now it has been *Modernized*.

Illustrations from
COOKERS and GEYSERS Ltd.



IN his article on page 28 Mr. Costello shows how the office can be made profitable and, at the same time, costs can be cut. The illustrations on this page provide a fresh example of this type of effort. By planning their office and showroom along up-to-date lines, Cookers & Geysers, Ltd., London, have (a) made a small office capable of big output, (b) provided pleasant working conditions which results in steadier, better work from the staff and (c) used the office as a "sales point." Its smart, attractive layout and appearance impresses customers who call at the showroom, which is alongside the office.

The two illustrations (*top left and above*) are of the general office. Both provide good examples of excellent natural lighting. There are no odd corners

(Continued on page 44)

The two illustrations (right) are of the showroom. The first gives a general view. Notice that the company's products have been displayed, where possible, under 'home' conditions. The bath, for example, has been specially built-in for demonstration purposes. The gas boiler shown at the far end of the office is alight. It provides heat for all the offices, a practical demonstration for the visiting customer. On the extreme right is shown a close-up of one of the small heaters installed in the showroom. It is used every day by the staff at tea-time. Within a few seconds of being turned on it produces boiling water for the tea-pot, another practical demonstration for the visitor who calls 'at the right time' in the afternoon



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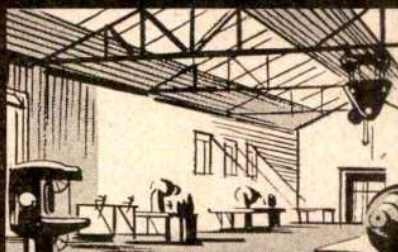
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NEW TRAILER PUMPS RAN PERFECTLY FOR 14 HOURS CONTINUOUSLY

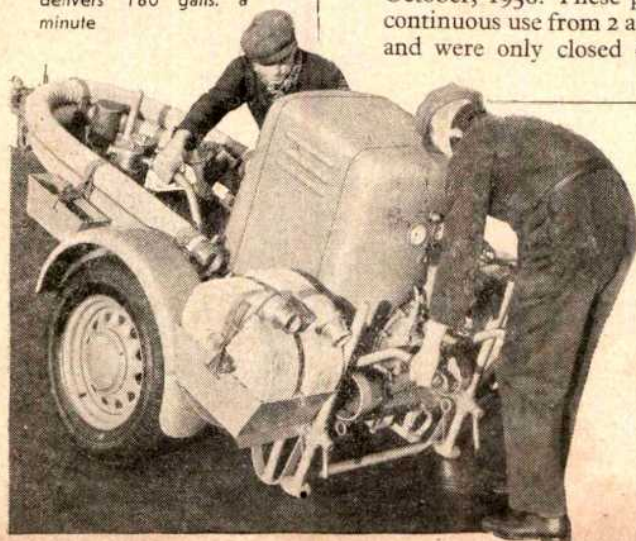
Here is one of the pumps referred to—type MG 3/II made by Sigmund Pumps Ltd. It can be manhandled anywhere by two men, yet delivers 180 galls. a minute

Read this letter from the Chief Constable of South Shields:

"Trailer pumps Nos. 878 and 879 supplied by your firm were used for relaying water to a fire at Messrs. J. Wardle's timber yard, Stanhope Drops, in this borough, on the 31st October, 1938. These pumps were in continuous use from 2 a.m. until 4 p.m. and were only closed down to check

engine oil levels. They were fed with water pumped from a fire engine a considerable distance away, maintained a constant pump pressure and each delivered water through two lines of hose, supplying $\frac{3}{4}$ " branch pipes. Auxiliary Firemen were pump attendants and reported that at no time did these pumping units give trouble. The pumps gave excellent service and the value of the test, under actual fire-fighting conditions, cannot be over-estimated."

Signed Alex. D. Wilson,
Chief Constable.



3,500 'Sigma' Trailer Pumps have been ordered, and already over 200 Fire Brigades are using these units.

The type illustrated is made to Home Office Specification, and has been approved by the Fire Brigades Division of the Home Office after exhaustive and comparative tests. Official approval is amply demonstrated by recent Home Office orders for 3,500 Sigmund Pumps, and by the fact that Sigmund equipment is being used by over 200 Fire Brigades, including Liverpool and Manchester.

SIGMUND PUMPS

Sigmund Pumps (Great Britain) Ltd. Works: Kingsway, Team Valley, Gateshead-on-Tyne, 11. Tel.: Low Fell 76030. London Office: Bush House, London, W.C.2. Tel.: Temple Bar 6296/7.

Pay Load Test Upholds

'DEPENDABLE PERFORMANCE' Claim for Austin's New 3-Ton Truck

SINCE the new Austin commercial vehicles passed from the experimental to the production stage, people concerned with business transport have wanted to learn of their capabilities. While no one ever doubts the ability of any Austin product to do its work efficiently under the most exacting conditions, the company's re-entry into the commercial vehicle field has caused speculation among discriminating users. And they are, in the main, somewhat conservative in buying newly introduced models.

When, therefore, the Austin Motor Co., Ltd., placed a new 3-ton truck at my disposal for test purposes, the occasion was one for going all out to see what the new job was really like. That meant submitting the vehicle to abnormally severe treatment. It also gave every opportunity of showing what Austin "dependability" implies in terms of commercial vehicle operation.

The route used for test purposes traverses the undulating country of the North Downs. It passes a sand-pit where, on previous trials of new vehicles, I have conducted exhaustive investigations in connection with truck performance.

Payload Weighed Three Tons 14 Cwt.

Before any attempt was made to record the performance of the new Austin, the vehicle was driven from Godstone, Surrey, to a near-by weigh-bridge, where the gross weight of 6 tons was recorded. Of that total 3 tons 14 cwt. represented the pay-load, the remainder being made up of the vehicle weight, plus the usual equipment.

Examination of the chassis lay-out showed that the correct principles of weight distribution have been applied without sacrifice of load-carrying space. The long wheelbase model allows a maximum legal body length of 15 ft. 6 in. behind the cab. The cab gives plenty of room for a tall driver and his companion. In all other respects, driver comfort as well as easy and safe control all conform with the high standards now recognized as essential in commercial vehicles.

These points were confirmed as I drove the Austin over a specially selected part of the test course, including several steep hills and winding lanes. Here the qualities of accurate directional control, quick gear manipulation and reliable brakes were in constant demand. After about 30 minutes of hard going I felt pretty certain that the Austin would put up a good show

By
**RICHARD
TWELVETREES,**
A.M.I., Mech.E.



FACTS AT A GLANCE

Vehicle Tested: Austin 3-ton Drop-sided Truck.

Makers: Austin Motor Co. Ltd., Birmingham.

Capacity: 3-tons.

Body Length: 15 ft. 6 in.

Wheelbase: 13 ft. 1 in.

Fuel Consumption: 14.3 m.p.g.

Pay-Load Ton m.p.g.: 42.81

Maximum Gradient Climbed: 1 in 3½.

Annual Tax: £30.

Vehicle Price: £322.

where route conditions are exacting.

There is one point about truck performance that must not be overlooked when evaluating new models in the 50-cwt. unladen weight class. Sometimes manufacturers have been content to offer good normal performance over average roads. This may suit a fair number of operators well enough. A truly reliable 3-tonner, however, must be capable of hauling its full load, plus an overload now and then, up very steep hills.

The Austin was driven, accordingly, to Dome Hill, Caterham, where a gradient of 1 in 3½ is likely to trouble a test driver unless the engine has abundant power.

Developing 70 b.h.p., the Austin six-cylinder overhead valve engine, aided by a 48.3 to 1 bottom gear, made easy work of the ascent and had power in reserve. On a second trial we made a spectacular "stop-and-restart" from a point where the gradient is steepest.

Apart from proof of hill-climbing performance, this gradient enables one to take accurate readings with Tapley meters. Its concrete surface presents excellent wheel adhesion, which renders readings of the instruments reliable to a degree.

Before making a third ascent, I asked the Austin representative to take the wheel and leave me free to concentrate attention on the instruments.

When the hill was approached on top gear a maximum pull of 100 lb. per ton was recorded. Just before changing down from third gear, the pull on that ratio was 170 lb. per ton. After that the climb was continued on second gear until the engine was allowed almost to stall. At that moment the performance meter showed a pull of 350 lb. per ton, leaving the truck to continue from almost a standing start. Even under such extreme and artificial conditions, the engine built up its power readily.

Fully-Laden Truck Held On This Gradient

On a 1 in 3½ gradient the engine had so much power in reserve that the actual pull on bottom gear could not be recorded. I should estimate the maximum to be in the region of 650 lb. per ton. Preliminary checks on the action of the Lockheed hydraulic braking system and the mechanical hand-brake proved that the fully-laden truck could be held on the 1 in 3½ gradient without creeping. Further brake tests were imposed after the drums had been warmed while descending a long hill.

Decelerometer readings were excellent. At a speed of 30 m.p.h. on a dry and level surface, normal application of the pedal produced a braking efficiency of 66 per cent. A simultaneous stopwatch check gave a figure of 2.1

(Continued on page 41)

THE CHEMIST SAID: *"Thank you, Mr. Plane
— you cleared my shelves! . . ."*

When Air Publicity first flew a plane to carry the simple persuasive idea of a famous patent-medicine over his vicinity, the up-country druggist was staggered when next day his stock of that commodity was sold right out. He had to wire for fresh supplies.

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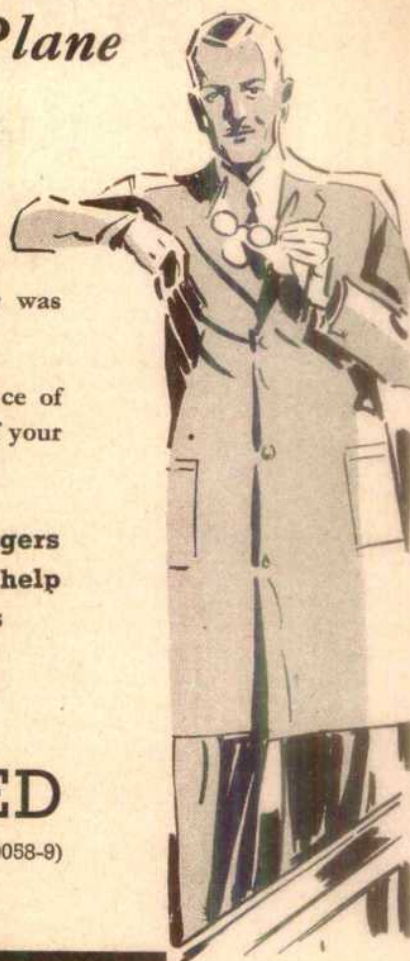
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in any type of concern. Further, VIS-ALL can be applied with proportionate economy to the small business as to the large. Practical tests have been made to prove the value of VIS-ALL in handling from 100 records up to 40,000. And the cost is low enough to bring the full advantage of visual control within reach of everyone.



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Mass Output—YES

but this system

Also Maintains Quality of Product

ONE of the urgent problems of production management to-day is to maintain quality of product while raising output. Demand, price levels and competition frequently combine to depress quality, yet most manufacturers admit that in the long term this is "bad business." Lowered quality of product leads eventually to (a) dissatisfaction of customers, (b) loss of sales and (c) lower profits.

There are exceptions, of course, but in general this is true, especially in this country. The average Briton, while responsive to price-appeal, also has a keen eye for quality.

Cut Costs But IMPROVE Product's Quality

The manufacturer's problem, so far as the factory is concerned, is therefore to use methods of production that will maintain or improve quality of product. Any firm can cut costs by lowering quality; *only first-class management can cut costs while improving quality.*

The methods used in production are mostly well known to-day. But it is always of interest, and mostly profitable, to examine successful use of these systems.

By studying the relationship between the individual stages of manufacture, between operators and machines, there are many firms which have maintained quality of product while increasing output and profits and reducing overheads per unit manufactured.

The ideal system, of course, would embody the advantages of mass-production without its limitations of excessive standardization to the sacrifice of quality.

A firm which is working on this "happy medium" system is Crompton Parkinson, Ltd. It is used in the manufacture of A.C. motors at the firm's Guiseley works. Although the basis of the system is standardization—as it must be of any intensive production system—the range manufactured is so wide that all requirements from about $\frac{1}{4}$ h.p. to 200 h.p. are covered. Use of the "flow-production" system has reduced overhead costs per unit. That has made possible the embodiment of features which are usually exclusive to expensive specially built machines.

A most important point is this: each machine is made as an individual unit and is given every test, including routine tests on the flow-bench, to guarantee unflinching service. In this way the drawbacks of standardization are minimized. Indeed, this effort to ensure each motor is well made is so

From

CROMPTON PARKINSON LTD.

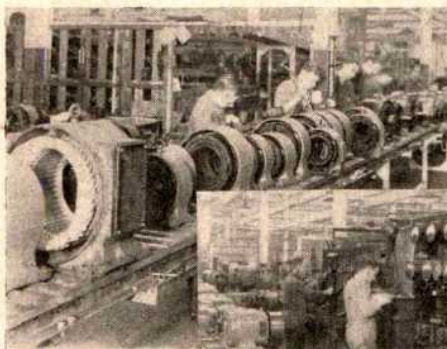
successful that very few come back with faults.

This reliability, of course, calls for the use of modern machines in all stages of manufacture. Equally as important is the operation of those machines by skilled workers, for even the most watertight system depends ultimately on the men who control and operate it.

At Guiseley a highly trained personnel work under conditions conducive to efficiency. There is none of that "belt work atmosphere," men working under

The castings, for instance, come from a famous Staffordshire foundry. *They are of such a fine finish that considerable subsequent machining can be eliminated.*

This, incidentally, is a typical example of cost-cutting in a constructive way. By using a quality raw material the extra cost is offset, to some extent at least, by reduction in process costs. Actually the castings are finished on special precision grinding machines that work to an accuracy of one-quarter of a thousandth of an inch. The measurement of the diameter of the shaft is shown on a dial micrometer. This instrument is so sensitive that the operator must not touch it, as the tem-



Finishing touches (top) are given to stator frames on a conveyor. Routine testing of motors (middle) is carried out on the flow test bench to ensure motor's condition. Small parts store (right) is only one in factory producing 1000 of motors weekly. Raw materials enter at rate finished products leave



'Control' Points in this Flow System

pressure. The management's viewpoint is that men who are expected to be little more than mere automatons cannot work intelligently or at their best. For this reason every measure taken ensures that where completely automatic operation is impracticable, as much as possible of the actual work is done by the machine. This leaves the operators to give their undivided attention to the machine's accuracy.

Another important element, of course, in production of a reliable article is sound raw materials. The steel, shafts, bearings, castings, stampings, and D.C.C. wire, all are of a high standard. In every case Crompton's purchase from the recognized leading suppliers in the respective markets.

perature of his hand would impair the accuracy of the reading.

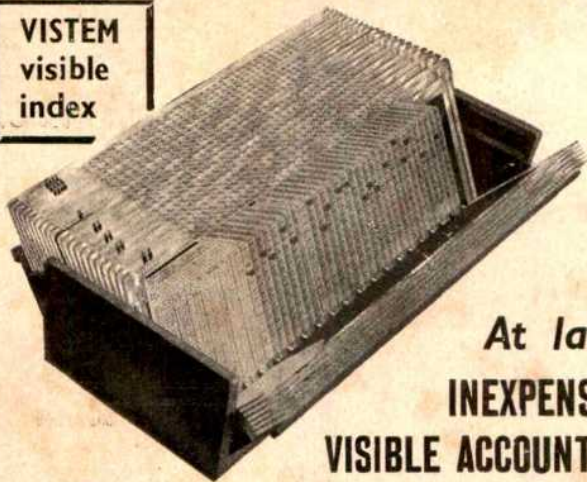
Stator winding and impregnation are perhaps the most highly skilled stages in the manufacture of an electric motor. Both operations are carried out by a specially trained staff.

In this section is another example of the thorough nature of the effort to make the working conditions as good as possible. Special lightweight hoists have been installed to save the girl operators from lifting heavy loads. The stators are mounted in cradles that can be readily moved at any angle, which gives easy access for winding.

It is through studying details such as these that the important improvements

(Continued on page 39)

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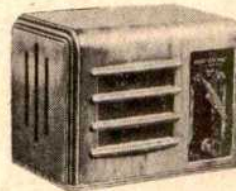
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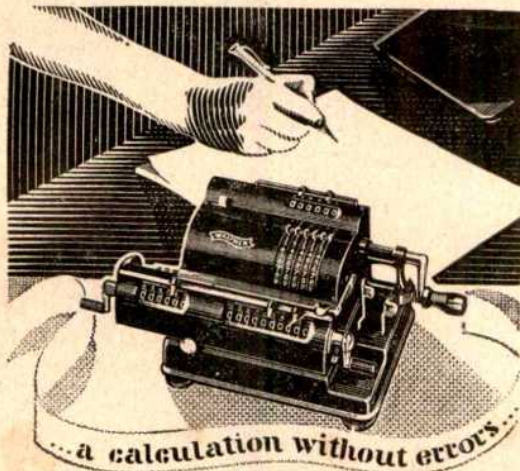
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There Are Dishonest Employees— This Insurance is a Safeguard Against Losses

BOLTS and bars, night-watchmen, burglar-alarms, thief-proof safes—none is of any avail against dishonesty on the part of an employee. An efficient audit is, of course, a safeguard to some extent, but the embezzler-proof system of book-keeping has yet to be invented.

Let me quote a well-known legal writer*: "Wherever a person, in the course of his employment, or in pursuance of his duties, is entrusted with the collection or receipt, or with the custody or control of money or valuable securities, or has access, by reason of his position, to the money or valuable securities of another, there is, in a special degree, the risk of loss by misappropriation." So once again the employer has recourse to insurance—in the form of a Fidelity Guarantee.

In the old days it was the custom for a friend or relative of the employee to become surety for his honesty. There are, however (one might almost say *were*, for the system is nearly extinct) many objections to private suretyship. It was not easy to find a person willing to give a Bond and be financially acceptable to the employer. It was nearly always embarrassing for the employee to have to ask a friend to take on such a burden. Deserving men were often unable to obtain a responsible post at all because they knew nobody who could act as surety.

Even when a suitable surety had been found, difficulties were not necessarily at an end. The surety might die or go bankrupt, and the employer might not even discover this until he had occasion to make a claim.

Antecedents of Staff Investigated For Employers

Modern practice has got rid of all these disadvantages. A large number of insurance companies are willing nowadays to issue a guarantee, indemnifying an employer against loss through defalcations by a named employee. Needless to say, the company, before giving cover, will satisfy itself as to (a) the employee's character and record and (b) the efficiency of the employer's system of business. In other words, the insurers will save the employer a great deal of trouble by investigating (probably more effectively than he could) the antecedents of his employee or prospective employee. Indeed, they may be able to suggest improved checks which the employer can introduce with his system of accounts. Incidentally, the insurance company may decline to guarantee the honesty of an employee if they consider his salary inadequate for the responsibility he bears.

Among employees for whom Fidelity

Guarantees are usually effected are cashiers, pay clerks, book-keepers, collectors, commercial travellers, branch or shop managers, and building society officials. Such people as treasurers of trusts and charities are also often required to provide a guarantee.

'Collective Policies' Issued For Big Firms

Where a large firm is concerned it is quite usual for a "collective policy" to be issued. This covers a number of employees, each being mentioned by name and guaranteed up to a specific sum. Names can be added or deleted by endorsement when necessary.

No employee when first appointed or promoted to a responsible post can reasonably object to being the subject

If you have any kind of
INSURANCE PROBLEM
write to the Insurance Consultant,
BUSINESS, Whitefriars House, Tallis Street, London, E.C.4

of a Fidelity Guarantee insurance. However, when a firm first effects a guarantee on its staff the employer may be unwilling to hurt the feelings of senior employees by suggesting that they should be included. To meet this special condition the insurance company sometimes arranges to include such employees without their knowledge. Another method, of course, is to leave them out of the insurance altogether. But, unfortunately, one sometimes hears of the trusted old employee, "quite above suspicion," who is suddenly discovered to be taking his employer's money.

A different form of loss which can also be covered by insurance is the theft of cash in transit. In London and other large towns there have recently been a number of daring robberies from employees engaged in bringing wages from the bank or carrying the day's takings to the bank. Occasionally such *coups* may have been effected with the connivance of the employee concerned.

This risk is usually included in the insurance. The rate of premium is calculated on the estimated annual amount of cash transported. At the end of the year it is adjusted in the same manner as the premium on a Workmen's Compensation insurance. The rate of premium will, of course, vary according to the circumstances and the length of the journey but is usually a very modest one.

*A. W. Baker Welford, The Law relating to Accident Insurance.

This System Maintains Quality - - -

(Continued from page 36)

are made. These are the "finishing touches" to a system. But such details are vital. And although the system could be used elsewhere with success, without the details and the thoroughness it would fail.

The success at Guiseley is evident in many ways. The recently introduced "E" range of motors, for example, embody special characteristics, yet are produced on the flow-production lines described. This means that they can be sold at lower, more competitive prices than would otherwise be possible. And that result, surely, is vital test of the value of any system of production specialized, "flow," or mass.

PORTABLE Shelters For Your Key Men

PORTABLE bullet-proof shelters for key men in factory and office A.R.P. service have just been put on the market by a Birmingham firm. They provide protection against blast, splinters, falling masonry, etc., caused by high-explosive bombs.

The A.R.P. system depends on the services of wardens and other officers at observation posts and report centres. Without these key men and centres there can be no efficient organization nor use of fire, rescue and decontamination squads during and after a raid. It is, therefore, essential that the executive personnel, who will be more exposed to danger than most of the rank and file, should be provided with as much protection as possible in the performance of their duties. And the essential function of this new type of shelter is to provide that protection.

Take, as an example, engineers at water and gasworks, power stations and other centres of control of essential services. A bomb might easily kill or wound them all at any one centre yet not put the plant out of working order. Nonetheless, without the engineers and other technicians, the plant could not be operated. All sorts of needless dangers then arise. If, for instance, electric current was not cut off, rescue squads might be electrocuted; if fires

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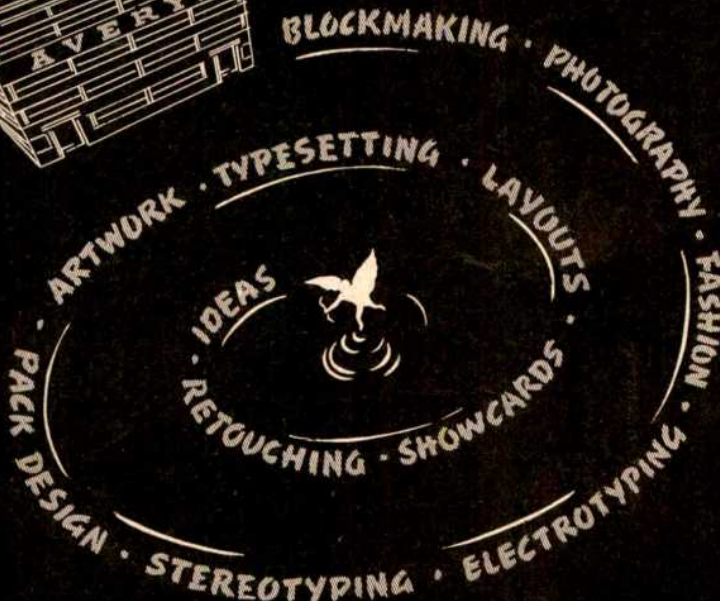
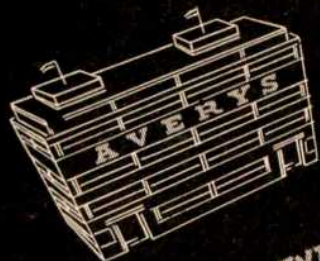
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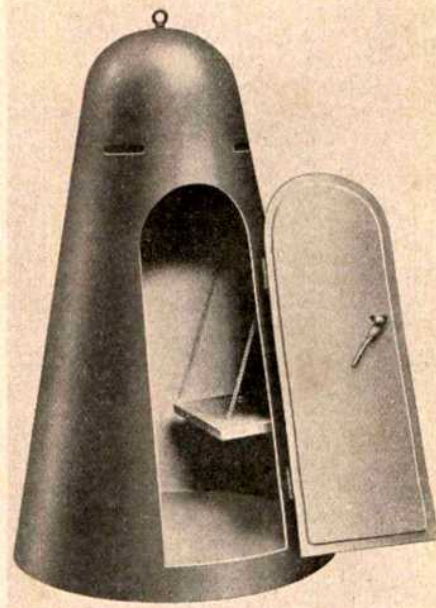


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broke out there would be no one to raise the pressure of water or, in the case of bursting sewers, cut off the water to prevent contamination.

The examples of dangers that arise from casualties to key men can be given by the score. They extend to all phases of A.R.P. control work, in public, private or industrial spheres.

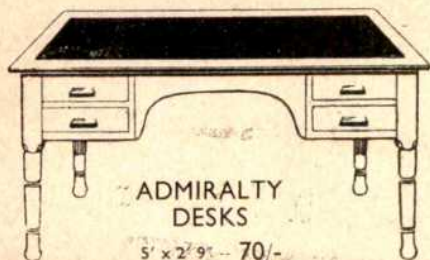


Most industrial concerns are organizing A.R.P. systems along lines similar to civil A.R.P. and, similarly, their key men who are exposed to special dangers in trying to safeguard the lives of the rest of the staff, and in looking after the property of the firm, must be protected.

In this category are power-house engineers, boiler-house men, switchboard operatives, men patrolling stores of inflammable materials.

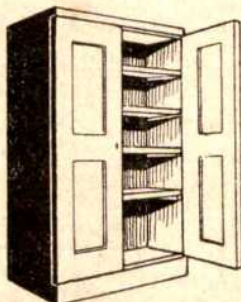
The portable shelters, which are built by Constructors, Ltd., Birmingham, are manufactured from bullet-proof steel plate. They take up little space and can easily be stored until an emergency arises. They are fitted with a strong eye at the apex to facilitate transport to action stations. Holes are provided in the base of each shelter for anchoring it to the ground. Bullet-proof slots allow those inside to observe what is going on without danger to themselves.

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Test of Austin's New 3-Ton Truck

(Continued from page 34)

seconds, the equivalent stopping distance and rate of retardation being 47.7 ft. and 21.2 ft., per second, respectively.

A reading of 30 per cent obtained by using the hand-brake under similar conditions shows that the truck can be held on a down grade of 1 in 3.18, given a surface of reasonably good adhesion.

My experience of commercial vehicle braking leads me to regard such results as ideal. Brakes designed to produce more violent action are apt to be dangerous when applied suddenly in emergency.

The results of hill-climbing tests leave no doubt whatever as to the ample power developed by the Austin engine. The next matter to examine was its capacity for quick acceleration under varying conditions.

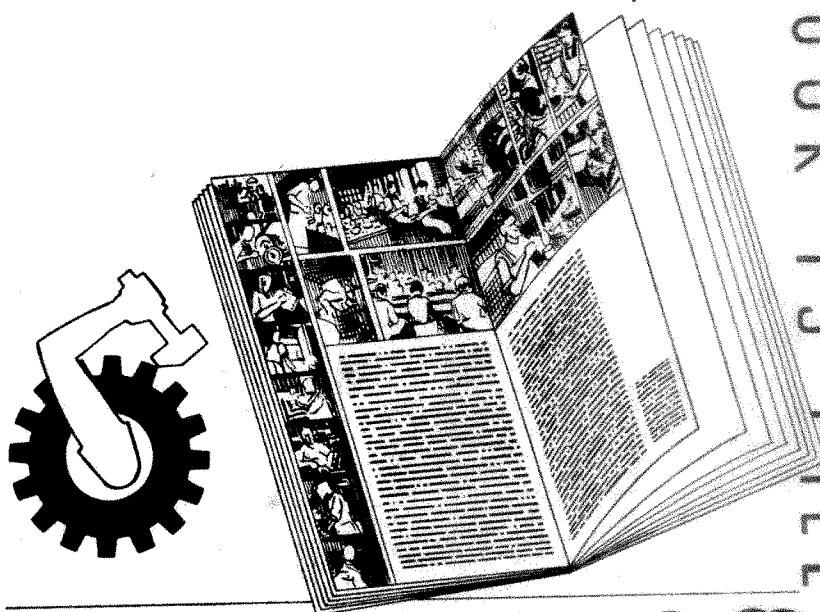
From rest on bottom gear with subsequent engagement of the higher ratios at correct engine and road speeds, the new Austin reached its legal speed of 30 m.p.h. in 25 1/5th seconds. This speed can be gained more quickly by starting on second gear. The test, however, served to demonstrate the quick action of the clutch and selector mechanism which enable the driver to make the best use of gears for general running economy. The more exacting demands upon engine performance at low crankshaft speeds by accelerating on direct drive from 10 to 30 m.p.h. produced the figure of 25 seconds. The speed increase was unaccompanied by the slightest vibration or irregularity from the transmission.

For ordinary purposes, these two acceleration tests are good enough. But to complete the usual data on independent road trials I included one in which a start is made from top gear. This imposes very severe momentary stresses on the entire mechanism as the vehicle begins to move away under full load.

Had not the clutch been designed with generous frictional surfaces and means for transmitting the engine torque through a flexible clutch centre, this test would certainly have produced a smell of heated fabric or jerky trans-

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mission of engine power. But the Austin withstood the conditions remarkably well. No more than 25 4/5th seconds were occupied in gaining the speed of 30 m.p.h. from rest.

While tests of this character are in progress, observations on all-round performance must include behaviour of individual models when travelling over rough surfaces. A truck may work splendidly on good roads, only to become more or less unmanageable when driven into difficult places. It remained to be seen, therefore, whether accepted suspension theories and constructional practice had been applied to the best effect in the new Austin chassis.

Truck Passed All These Stiff Tests

No better truck "proving ground" could be imagined than the sand-pit at Merstham, where the new model was put through its paces. The roughest sections of the workings were traversed with ease. The springs, called upon to resist impacts and torsional stresses of every kind, revealed the robust construction which is an outstanding feature of the new Austin commercial vehicles. One detail of performance that impressed me greatly was the powerful torque exerted by the engine at low crankshaft speeds. Through this the fully-laden vehicle was able to extricate itself from seemingly impossible situations with ease.

I made several checks of petrol consumption by using a graduated tank coupled direct to the carburettor and measuring in supplies of No. 3 commercial petrol.

During these tests a uniform speed of 30 m.p.h. was maintained wherever conditions permitted along a good average main road. No "coasting" in neutral was allowed on down grades, or artificial means permitted to economize petrol or to produce flattering results.

Three tests gave the average of 14.3 m.p.g. as the result, equivalent to 42.8 pay-load ton miles per gallon. It should be remembered that this was a full-load test. In service, when a big proportion of the mileage is run with the vehicles partly laden or empty, the all-round economy should be even greater.

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Use These Export Facilities

(Continued from page 15)

have dealt with this man," my friend explained; "I know he is sound."

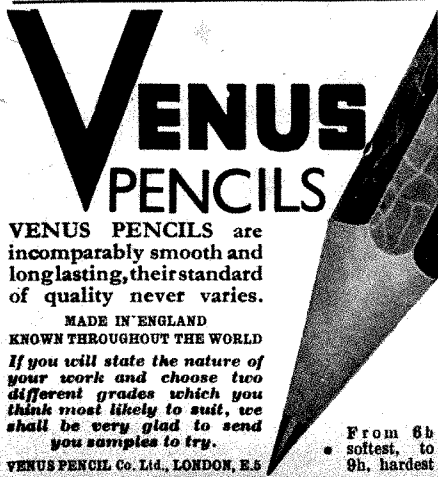
As a central clearing-house of information on credit and standing of overseas buyers the department is unrivalled. And the more the department is used by firms, the better it functions. A good instance of this is found in the case of a certain continental buyer. He was recognized as "safe" for £5,000 credit. Consequently, when eight firms that he dealt with each received a £5,000 order, they had no hesitation in accepting, even when the buyer stipulated that each must "keep quiet" about the order concerned.

It so happened, however, that all eight firms were insuring regularly with the department, and, as usual, came to insure this order. Adverse reports about the buyer had already reached the department, and suspicions were confirmed when the eight exporters came for insurance. The department officials were able to warn the firms. As confidential adviser, the department did not disclose to each firm name and details of the others, but merely related the key facts. A little later the continental buyer disappeared. But the eight companies, through taking the department's advice, lost nothing.

When foreign buyers fail, the department never interferes with negotiations, but is always ready to co-operate. Actually, most firms turn over negotiations entirely to the department, which is in a powerful position to deal with the intricacies of foreign laws and courts.

Important from the manufacturer's viewpoint is the fact that payment by the department is made as soon as the debt is admitted to rank against the estate of the bankrupt. You do not have to wait through the protracted process of liquidation. In addition, when payments of dividends are made, you get a 25 per cent share or whatever percentage of the credit that was not guaranteed.

The points I have mentioned merely outline the services given by the depart-



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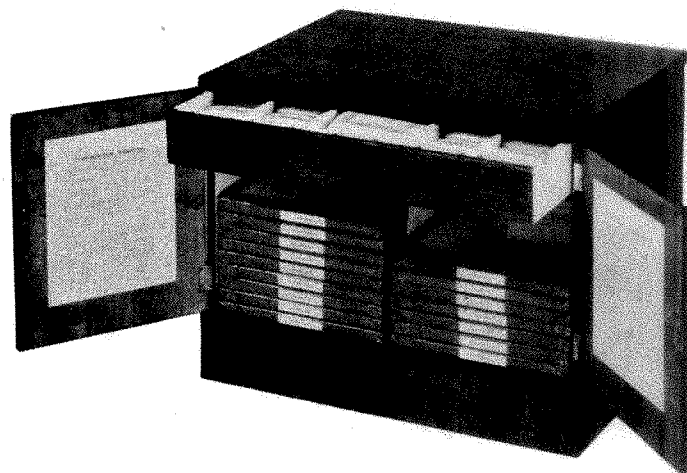
It happens again and again—no system is proof against it. Pass on the burden of such loss to the "GENERAL", a Company with Assets of £20,000,000. Enquiries are invited for individual or collective Fidelity Guarantees. The cost is small.

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CLASSIFIED ADVERTISEMENTS

(Continued from page iii of cover)

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Brandt Wage Paying Machine for disposal. Almost New. Originally cost £60. Any offers? Apply Box 502, BUSINESS, Whitefriars House, Tallis St., E.C.4.

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ment. Every manufacturer who is exporting or who can export should get in touch with the department at the head office, 9 Clements Lane, London, E.C.4, or at one of the branch offices in Manchester, Birmingham, Bradford, Sheffield, Glasgow and Belfast. If it is not convenient for you to call, the department will send along an expert to discuss your special problems.

Once more I would like to stress the point that the services are for all manufacturers. The fact that you are a very small firm makes no difference. The department is as eager to help you as it is to do business with big companies.

If you have never done any export trade, find out if there is a market for your goods. Get in touch with the Department of Overseas Trade for this investigation. (See BUSINESS for March 1939, page 9.) If you find a market—and it is quite likely that you will—make contact with the Export Credits Guarantee Department and use the services I have described.

ACTION Through Progress Committee

(Continued from page 12)

home for an operation. Even under these conditions he kept rigid control of the firm's business. His secretary brought the problems to his bedside for decision, problems as simple as the query: When can you make so-and-so delivery?

This slowed up the business in all ways. No executive there could make any worth-while decision. Indeed, so powerful was the influence of this one man that his subordinates even talked with his phrases. In a conversation one would believe that the managing head was at his employee's side, prompting the answers!

If executives cannot make decisions freely they cannot get things done. That is our viewpoint.

Each Executive Has Understudy For His Job

Just as I have confidence in my executives so can they rely on their assistants. Each assistant executive is an understudy for his senior's job. He can step in and carry on in an emergency.

Building up this executive reserve is an important point of policy. Selection of young men for the job must, of course, follow the same lines as that of choosing the senior men. The same qualities of character and sense of responsibility and leadership are required. Young men who show any signs of such qualities are encouraged and developed.

They are gradually moved up to increasingly responsible positions.

The process goes on over a period of several years. By the time they have climbed to a good minor executive post we have gained fairly sound knowledge and understanding of their capabilities, character and temperament. We can mark those fitted for the highest jobs.

Examining Correspondence Key To Complete Control

With all this machinery, men and spirit for getting things done there is need only to add routine control and follow-up. This I exercise very simply by having all correspondence, departmental as well as general, pass through my office. I read it all very quickly; a glance at the page is usually sufficient.

By this means I can keep a check on every active phase of the business. If, as very rarely happens, I see some hitch developing in getting a decision carried out, I attend to the matter immediately.

An obvious criticism of my control routine is that the flow of correspondence to my office is likely to create a "bottleneck" and slow up progress. This is not so. I do not allow papers to accumulate on my desk. They must be dealt with immediately, a practice possible because I do not have to spend time discussing problems with the various executives. All the usual time-absorbing conferences are made unnecessary by the *Progress Committee*. Thus, my control causes no damming up of work, and I keep completely informed of all activities.

This Office is a Profit Maker

(Continued from page 32)

where daylight does not fall. Notice, too, in the top illustration, the clock over the folding doors; it can be seen at a glance by all in the office. Incidentally it is a clock with a double face, the other dial appearing in the showroom which is reached through the doorway.

The small gadget on the wall to the right of the doorway is a thermostat for control of room temperature. Other details worth observing are (a) the built-in telephone switchboard and (b) the cupboards and files built in at the rear of the office. Supplies, records, and so on, are all kept tidily out of sight in the cupboards which are equipped with sliding panels.

The second photo (on the right) shows the other end of the office. There, again, the files and records are neatly stored away behind sliding panels but are easy to get at. Note, too, that all desks have glass tops.

The illustration (middle left) is of the managing director's office. At the entrance to his office, from the general office, is a light signal. At red it means "engaged." As you can see, the office is very tidy and neat. Here again there is a special cupboard behind the smooth panelling. There are also two exits, one through the general office and one to the showroom.



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RECORDERS, TIME SAVERS, MASTER CONTROL SYSTEMS

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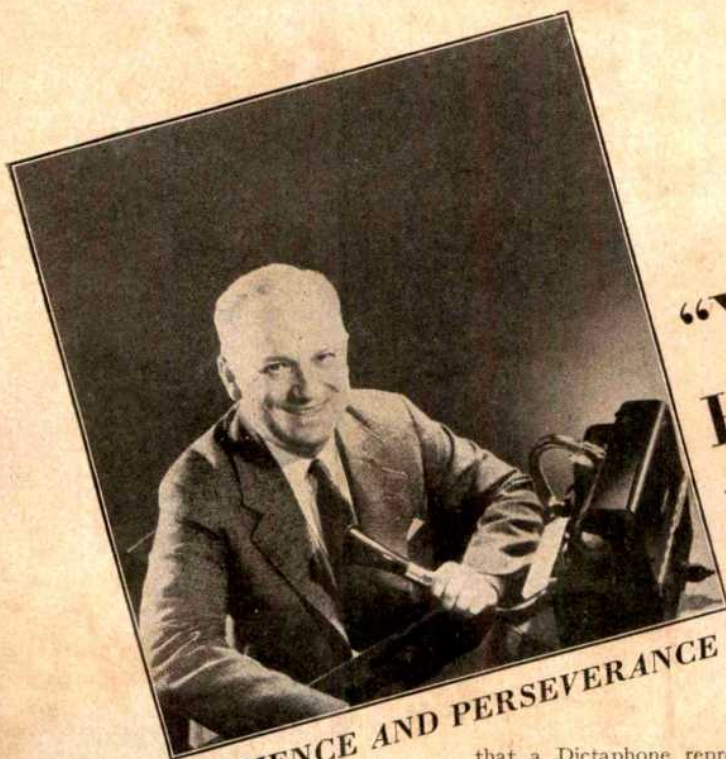
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"YOU CAN'T KEEP A GOOD MAN DOWN"

PATIENCE AND PERSEVERANCE ALWAYS WIN THROUGH IN THE END

By THOMAS DIXON



IT'S an old and very true saying that "You can't keep a good man down." Sooner or later brains and industry get to the top.

Every business man knows dozens of cases in which men who have started in a humble way have by their grit and perseverance raised themselves to be leaders in their own particular sphere, if not in the affairs of the country generally.

It is not only in the case of men, however, that quality comes to the top. The same certainty of advance is shown by machines, and methods: what is good, no matter what difficulties it has to face in the early stages, is bound in the long run to win general acceptance.

The steam-engine is an excellent instance. So is the typewriter: so is the motor-car. To all of them, when they were first introduced, the bitterest hostility was shown by the people who thought the ways of the Dark Ages were good enough for the modern civilization that was just dawning.

Nevertheless, the pioneers persisted. They refused to be discouraged. They knew they had a good thing. And, to-day, the steam-engine, the typewriter and the motor-car are all a part of our normal daily life: we can hardly conceive how we should carry on without them.

Twelve years ago a certain important firm of manufacturers received their first circular about the dictating machine. At once they replied that they were "not interested." They had not realized that the story of the steam-engine, the typewriter and the motor-car was being told again in another guise.

In the course of years this firm were supplied at intervals, personally and by post, with new information about the Dictaphone. Six times they wrote that they were "not interested."

At last something happened: they asked

that a Dictaphone representative should call and prove the economy and convenience of the Dictaphone method.

To-day, that firm is using 150 Dictaphones: after twelve years of patient work the good thing has come to the top so far as they are concerned. "You can't keep a good machine down" any more than a good man. Merit in the long run carried conviction, and to-day the Dictaphone has no firmer friends than the firm who six times declared that they were "not interested."

Only a very important firm, it is true, can use 150 Dictaphones. But, comparing small things with great, there are many thousands of smaller organizations who after years of patient approach have been brought to realize that the Dictaphone method of handling correspondence is best because it is logical in its conception, simple and convenient in practice, and an unrivalled economizer of money and time. It is as far ahead of the pencil and notebook as the typewriter is ahead of the quill pen, the steam-engine of the stage coach, the motor-car of the horse and carriage.

You who are reading these lines, may feel that you are "not interested" in the Dictaphone. That is a mistake. You are interested in anything that will save your time, enable you to do more and better work, materially cut down your business expenses.

You may not see just how the Dictaphone will do all these things. That is quite a different matter. But that you are *interested* is beyond the shadow of a doubt: everyone is interested in economy and efficiency because they touch him personally and in his pocket.

Isn't it time that, in fairness to yourself, you started to investigate the Dictaphone? It isn't a very serious matter. It won't cost you anything. It won't occupy more than a few minutes of your time. You can do it right on your desk, in your ordinary work, without the least interference with your customary daily routine.

After all, whatever you think at the

moment, you will perhaps admit that it *may* suit you. If your mind is open to that extent carry the matter a step further. Let us show you, as we have shown thousands of others, the *how* and *why* of the Dictaphone. If you *don't* feel convinced after we have shown you, why, no harm will have been done. But if we can—and we are confident that we can—*prove* to you by actual figures, taken out *by yourself* in your own office, that the Dictaphone will save you time, labour and money we shall have done you a real service.

There is the case for the Dictaphone—*service*. Service to the man who is heavily laden with work and responsibility. Service to his secretary who has to struggle under the burden of shorthand. Service to the entire business community through greater individual production and increased efficiency.

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- It requires little space and is unaffected by vibrating walls or changes in temperature.
- Accurate time is always recorded.



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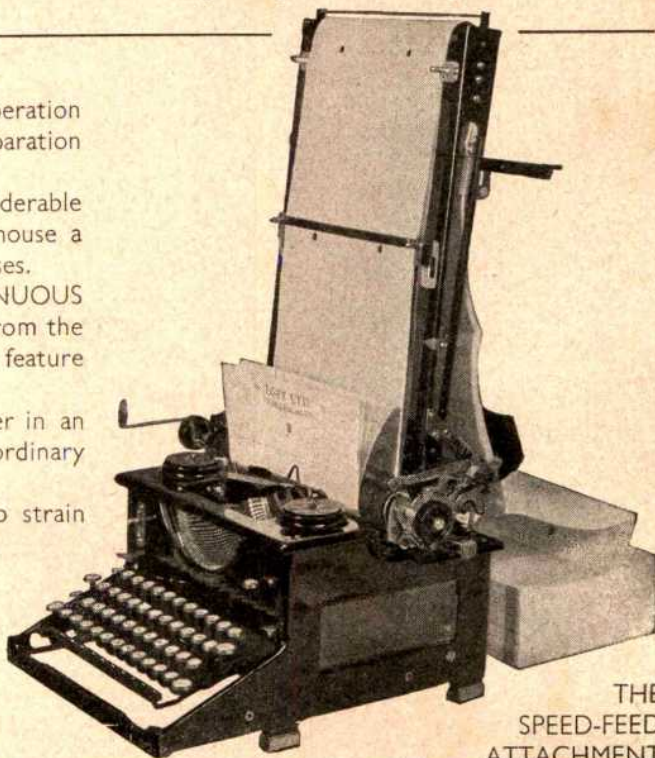
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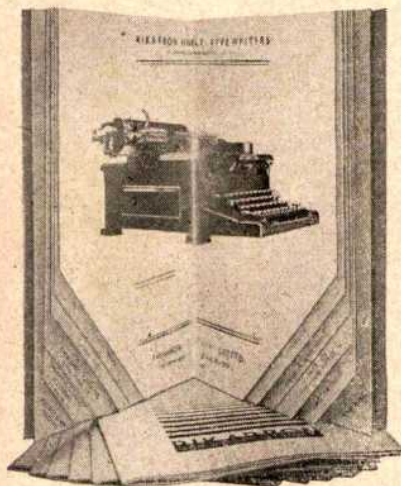
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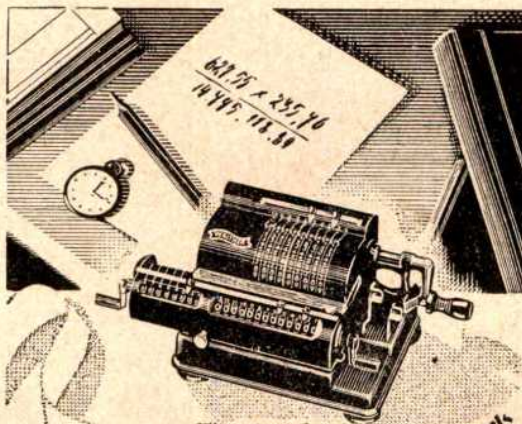
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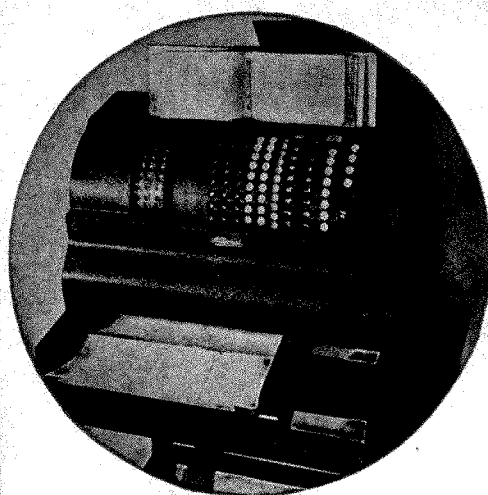
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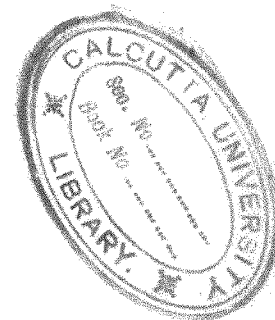
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To-day's Unusual Conditions DEMAND

Completely New Policies and Plans



THE most significant change in economic outlook since the Great War has taken place, and the management of every business, big or small, must awake to this fact. To solve vital problems that are arising, new plans must be made.

What are the facts of the situation? There are six of major importance: (1) Government priorities will be established; (2) a shortage of skilled labour will arise; (3) workers will have to be distributed to areas where they are most urgently needed; (4) Trade Union restrictions will have to be dealt with; (5) there will be a shortage in some raw materials; (6) unessential services will have to be curtailed.

While these do not exist all together and in full force at the moment, there is little doubt that they will shortly become major problems for industry. To ignore them while there is still time to plan against their effects is short-sighted policy. Nor can they be set aside as merely affecting major industries. They will influence all businesses for the coming two years, probably longer.

Four Factors That Influence Business Outlook

That eminent economist, J. M. Keynes, recently dealt with coming conditions in two articles in *The Times* (April 17 and 18, 1939). The points he made of special interest to the ordinary business man are these: (1) national income will rise by about 8 per cent (roughly £400,000,000) in the coming year or so; (2) loan expenditure this year will be at least £350,000,000 (probably £400,000,000), £220,000,000 more than that of last year; (3) with an allowance of an average output of £250 a head, the prospective increase in demand will need the services of roughly 1,500,000 men; (4) after allowing for overtime, longer hours, etc., for those already at work, plus other deductions, about 1,000,000 now unemployed will be given work.

Almost a revolution in national economy is taking place. Whether peace or war arises from existing conditions there is a new set of facts to-day. Business outlook has changed completely.

There are two lines of action management should take: (a) against the event of war, (b) to meet 'boom' conditions which, in any case, are likely to come.

In this article C. E. Day outlines some of the big problems to be settled and the type of plans needed.

These are vital facts the effect of which every managing executive must see. If the demand for labour and materials rises on this vast scale, allied with conditions that put the country on virtually a war footing, what business, however small, can escape the effects? None. But that is not bad. Far from it. Business will be good. Indeed, the level of activity can be expected to rise to new record levels. Markets will expand. Demand may outstrip supply.

Whether peace or war comes out of the present conditions, management's task now is to plan and prepare. Even if the present "betwixt and between" state is maintained, some kind of boom condition will occur. Whatever happens, the factors mentioned are expected to arise and bring with them problems to be solved.

The key question is: What kind of action can management take at once? The answer is complex. There is such a vast amount of planning to do that a specific programme cannot be laid out here.

There are, of course, many firms that have already made plans—or are now making them. But the majority of ordinary managing executives are trying to decide what must be done—and how to do it. That is the situation I have found in discussing the problem with many executives.

Some of the most constructive proposals for management that I have heard were put forward by E. D. P. Hardy, F.I.I.A., director of several companies and a leading industrial consultant. We were discussing what action firms should take now against the chance of war. This is what he said on problems affecting: (1) type of product, (2) labour, (3) transport, and (4) office:

"Making plans does not presuppose that war is inevitable. And by making such plans, possible economies and improvements in organization are bound to come to light.

(1) *Type of Product.* "If a firm makes goods, for instance, which are, or will be, required for government purposes, then every effort will have to be made to increase production. Supplies will be wanted in a hurry.

Make Plans For Switchover At Once

"If goods now being made are of non-essential or luxury type, the firm must decide what goods can be made. That must lead to planning the production, distribution and marketing of the new lines—a major task that should be put in hand now. During the Great War the change-over in the type of goods made was most striking. A great

number of firms to-day, especially in secondary industries, will find a vast scope for switching production. It is this type of action which will provide one way of restricting unessential services.

"It might be advisable; for example, to start making on a small scale some product which would be needed in greater quantities in war-time. This would give an opportunity to find out the 'snags' and to get a 'cadre' which would be the yeast for the loaf if larger output of the new line is required.

(2) *Labour*. "Then there is the labour problem. If production is not to be reduced, the managing director should take his organization chart and mark in colour the gaps he will have to fill due to men being called up.

"He can, for instance, take each type of vacancy in turn and see how it can be filled. As women will have to fill most vacancies, the first job is to see what promotions can be made. Next, the possibilities of getting suitable workers to fill the gaps disclosed must be examined and appropriate plans made and action taken.

Determine Employee's Plans In Case of War

"In any case, every firm should find from each employee what he or she will do if war breaks out. Many young women, for instance, will certainly go home or to friends in the country. Plans must be made to replace them. Other women and men will be engaged on some kind of full or part-time duty for the authorities. Obviously, each firm must know what part of their time will be available for work in office, factory or shop.

"The old problem of dilution of skilled workers must, of course, arise. There will be opposition to this from the Trade Unions unless they are converted beforehand, which is possible. One of the big snags is that the Unions are afraid of greater unemployment ultimately as the result of dilution. To overcome this, it might be wise for the employers' associations to undertake that unskilled men brought in for training shall not displace skilled workers at a later date.

"Redistribution of workers has, of course, been going on for some years. The new conditions will speed up the process. While it is true that many firms have scoured the country in an effort to get skilled men, the difficulties cannot be left to private enterprise to solve. Undoubtedly some action, possibly through the existing Labour Exchange system, will be taken by the Government to draft workers to areas where they are most urgently needed. The present labour-training scheme, too, is likely to be further developed to help cope with the situation.

(3) *Transport*. "Again, transport will be an important factor if war breaks out. Petrol and Diesel oil will be scarce and rationed strictly. Will deliveries be seriously affected in this event? To meet this problem, management might make arrangements to convert a pro-

portion of their lorries to 'gazogene' propulsion. By having one of the new gas-producers fitted, cars and lorries, etc., can run at about one-fifth the cost of petrol by using smokeless fuel or anthracite.

(4) *Office*. "The office, of course, comes into this scheme of things. Arrangements should be made now to make duplicates of certain records to be sent to a safe place if required. There will be no time to do this in the rush occasioned by an emergency. [See article on page 32 which deals with this problem.]

"An examination along the lines I have outlined will not be a waste of time or energy if, as we all hope, war does not arise. Going through an organization with a tooth-comb will in most businesses disclose a number of



Mr. E. D. P. Hardy, F.I.I.A., company director and industrial consultant. Some of his suggestions for executive action to-day are given in the article on this page (see text)

possible improvements in efficiency. These might be: (a) elimination of duplication and misapplied energy in the office, such as weekly returns started years ago and which overlap with other returns and figures; (b) introduction of mechanized accounting machines to give great economies and higher efficiency; (c) elimination of weaknesses in the works organization that have hitherto been tackled half-heartedly."

These points made by Mr. Hardy can, in the main, be followed up by the management of most firms. They suggest a type of policy and planning which is necessary now whether or not there is a war. Even if peace is assured, conditions which are almost upon us justify this point of view.

(5) *Raw Materials*. There are many other factors, of course, to be considered. Raw materials is one. With the vast armament programme now taking up not only men but materials in huge volumes, shortages in some lines are bound to occur. Already steel output, for example, is nearing capacity.

Firms that use imported materials should now make plans for supplies. If war happened, obviously bulky mate-

rials in particular—such as timber, paper, ores, minerals, etc.—will be difficult to obtain. Some attempt, of course, might be made now to curtail the amount of imported material, to use substitutes or to modify the product in line with this policy. In the case of home-produced materials especially there may be wisdom in "buying forward" where current prices are low. Knowledge of the raw materials' market in question and of your future requirements are deciding factors for or against this policy.

(6) *Anti-Waste*. As many materials, imported or otherwise, may become "scarce," anti-waste measures assume major importance. Every scrap of so-called waste should be saved. Economy drives in this respect ought to be maintained. "Flash-in-the-pan" efforts are not enough. Now is the time to get your factory—and office—staffs thinking on this problem. There is every reason to get plans working, because to eliminate waste is always good business.

(7) *Communications*. From an efficiency point of view, a factor worth serious attention is your telephone and inter-communication system. A hand-operated switchboard in an air-raid, for instance, would certainly result in a "jam" even if the operator remained calm and efficient. An automatic exchange would be more efficient under such conditions as it is in normal business life.

Communication Systems Are Valuable At Any Time

A loud-speaking inter-communication system, of course, is valuable at any time, and, war or no war, worth installing. In emergency it could be used to help orderly evacuation to shelters, for maintaining contact between look-outs, key men and the executives, and for broadcasting instructions and other messages to the staff in the shelters.

These points are guides to the general policy which far-seeing management is following to-day. It is recognized that the existing unusual conditions call for such policies and plans.

There can be little doubt as to the control which will be enforced immediately over every phase of national life if war breaks out. The government will buy all food; rationing plans have been made; 60,000,000 cards are ready to go out. Prices and allocation of all raw materials imported or home-produced are to be controlled; factories are to operate as directed by the government.

But the fact that such control will be established does not relieve management of the need to make its own policies and plans now. The war may not come, but the conditions I have outlined are almost certain to arrive soon. For this reason alone, therefore, every firm should prepare in every possible way for the immediate future. Delay now may have one of two results: (1) make your firm a hindrance rather than a help should Britain be involved in war; (2) leave you competitively at a disadvantage if, as is likely, peace is maintained and boom conditions arise.

How We PLANNED AHEAD To Meet Problems of Changing Markets

THE problem of maintaining production, volume of sales and margin of profit is one which the board of every company must at all times have uppermost in mind. Mostly the problem concerns directly only one of the three divisions—production, sales or profit—but in such arduous times as to-day all three are likely to be involved. And that means long-term planning.

A test of the calibre of management is the ability of a firm to plan ahead with long-range policies. A company where the executives have bent all energies on taking immediate profits and have given no time to charting future progress is soon in distress. It cannot meet competition from other firms that have planned and are prepared.

One of the most striking examples of the need to shape company policy to compensate for varying conditions has been provided by the radio industry. Changing conditions have been brought about by evolution to be expected in an industry which has grown up in a comparatively short period. The example of radio may be unique, but the main principles involved may need to be applied at some time to management of businesses in other industries.

Saturation Point Was Foreseen, Plans Made

As most informed persons know, this country has almost reached the point where the radio industry is manufacturing solely for a replacement market. Over 8,400,000 radios are now in use in Britain, which means that, roughly, 80 per cent of British homes have wireless receivers. Of the 2,000,000 or so that have not, a big proportion of their inhabitants have access to radios which they do not own. The remainder do not want or cannot afford sets.

The management of some radio-manufacturing firms realized several years ago that this state would be reached at about this time, and more than one of the companies engaged in the industry tackled the situation as it developed. When it became evident that, instead of showing annual progressive increases, radio sales were beginning to become stabilized, plans were already being put into practice. Active manufacturers started to develop new markets.

It is here that the long-range type of management and policy can be seen at work. Take the problem of what to make. There are a thousand different articles that a well-equipped, modern mass-production radio factory can turn out. If the motive of immediate profit governs choice, the range of products

From an Interview with Executives of E. K. COLE LTD.

available is big. But this short view is not the function of responsible and far-seeing management.

In the case of E. K. Cole, Ltd., of Southend-on-Sea, four new "businesses" were developed: (1) the Thermovent, a convection heater; (2) scientific instruments of a highly specialized nature; (3) plastic mouldings for industry; (4) electric washing machines.

In each case the decision to enter the market depended on favourable answers to such questions as these: (a) Does the product fill a known or potential real demand; (b) Has the product any outstanding qualities that make it significantly different from others which may already be on the market; (c) Can a profitable business be built up on this product alone; (d) What are likely to be the ultimate effects of entry into the market?

The answers to these questions are, of course, qualified by point of view and policy. Take the question of demand. A "demand" can be said to exist for almost any type of product, but it is

good or bad effects of selling such products are disregarded.

Again, as inferred in question (b), to put on the market goods which do not offer a significant advantage over, or are different from, existing products is a retrograde step. To produce "just another product" may yield a temporary profit, but nothing more. Progressive management demands much more. It aims at progress, not marking time; at vigorous individual development in all phases of business, and not merely at copying or wresting profits from others.

With all four developments plans were perfected only when E. K. Cole, Ltd., were convinced they were along new lines. In each case, of course, investigations were carried out exhaustively from the angles of production, markets, competition, future technical development, and so forth. For example, the introduction of the Thermovent was not made until a whole chain of inquiry had been completed. The investigations covered a survey of all existing heating apparatus, its advantages and disadvantages from the viewpoints of the architect, the heating engineer, the builder, the supply authority, the electrician, and, most important of all, the user.

In the Thermovent, E. K. Cole, Ltd., had an electric heater in which the known advantages of the convection



not always a "healthy" demand. There are always buyers who cannot or will not use any sounder basis than a price tag. Hence, there is always quite a big "demand" even for shoddy goods, which means there are persons who will sell these goods because of the profit. No consideration is given as to the result of such policy; certainly there is no thought as to whether the goods are essential and beneficial. The ultimate

principle were secured for the first time without the constructional disadvantages that previously outweighed them. The basic patents held by the company enabled it to enter the heating market with a product capable of unlimited development; a scientific answer to an almost universal demand.

The case of the Marconi-Ekco scientific instruments is a little different. Production of these grew out of demand

by other radio manufacturers for testing equipment designed for internal use by Ekco engineers. E. K. Cole, Ltd., have always maintained a big testing department. Indeed, the cost of testing radio products exceeds that of manufacturing them. The natural development, therefore, was for testing instruments and equipment to be designed on the most practical and commercial lines.

As the demand increased from outside for Ekco testing apparatus, the possibilities of building up this sideline into a business of importance were closely investigated. A real demand was found for special instruments of every kind.

The importance of the work done by this department is not easily overstressed. It is fulfilling a special function in helping every kind of industry to overcome production and other problems. A catalogue of the professions and industries for which it caters would never be complete, so rapidly do they multiply.

As can readily be seen, the development of scientific instrument production is completely in accord with the policies which have been outlined. Along with the other new products, the manufacture of instruments at Ekco works is "taking up the slack" between periods of peak production of radio. The new ventures help to solve the old problem of "filling in the valleys." And all the time they can be prepared to undertake a far more significant role: *they are all capable of major development.*

This brings us to a big point; management that functions along the lines indicated in this article must choose products which measure up to the highest trading standards and are capable of extensive long-term development. How can it be otherwise when policy takes cognizance of the wider issues involved in business enterprise? And experience shows that not only is such policy ethically the best, but it pays dividends consistently.

Plan to Develop Staff Talent

IN routine work women develop "nerves" much more quickly than men, a tendency which impairs their efficiency. They need some sort of stimulating influence in working life to keep them clear of this "danger state."

A good example of the way in which a firm can combat neurotic tendencies is provided by Marks & Spencer, Ltd. They have found that a stimulating creative hobby has beneficial effects. For that reason they encourage staff in commercial art, handicrafts, embroidery and dressmaking.

Once a year an exhibition of the work of assistants—men included—is held at the head office in London. Hundreds of girls send in dresses, posters, paintings, etc. And—this is important—these exhibitions reveal talent that can be used by the firm.

Store-girl artists and designers are, after training, transferred to the display and dress-designing departments.

Use this Rating System to Help Study Employee Morale



ONE of the outstanding advantages of rating systems is related to the present emphasis on employee morale. A rating system will not necessarily measure employee morale, but it may be drawn up in such a way that it will afford a practical approach to the study of individual morale.

This is the point of richest return from a plan of employee rating. Any company which is unable to apply its rating system to the problem of understanding employee attitudes and morale might well give some thought to revamping its procedure.

Staff Distribution Graded By Department Ratings

An analysis of ratings by departments should be made to determine the distribution of the ratings of employees as high, low, intermediate or whatever grades the system provides. Specifically, if we consider the criterion "dependability," rated at five levels from high to low, we should know what percentage of employees in a department are rated at each rank. If the returns are reliable, we should be able to deduce the relative standing of each department in this characteristic.

Where a defect in any criterion is indicated, it should be checked against the performance of the department to ascertain the reason for the deficiency. The foreman may be asked to explain why he has not improved this particular condition in his department.

Traits or criteria used in any rating scale should always be related to actual performance. A general summary of trait rankings will provide an index of the plant as a whole. If such a composite reveals, for example, that 56 per cent of the ratings in department "X" are at the "A" level and only 2 per cent of those in department "Y" are at that level, thorough investigation should be made of the causes of the divergence.

Comparisons Are A Guide To Actual Conditions

Comparison should be made of the relative ranking of criteria in each department and in the company as a whole. Thus if 31 per cent of employees in a department or plant are rated "A" in "behaviour" and only 9 per cent of the employees receive such a ranking for "safety," consideration must be given at once to the factor of safety.

The richest returns from the use of a rating or personnel audit should result from individual analysis. The

employee who rates "A" in all but one criterion and rates "D" or "E" in that criterion is a subject for careful study. However, this introduces a phase of personnel work that has yet to be fully developed.

Personnel Journal, February 1939.

Communication System Aids Executive Control

A BIG departmental store in Yorkshire has saved time, money and labour by installing an Ediswan Loudspeakerphone with fourteen extensions. It is used as a general broadcast system. Announcements to customers, early morning instructions to the staff, emergency calls, the location of executives or members of the staff absent from their departments, are some of the ways the system is being used.

The equipment incorporates special features which make it particularly suitable for the management of large stores, factories, offices, etc. It consists of one master unit and any number of extension speakers. The master is able to speak to one or any combination of extensions and the extensions can call and converse with the master. Extension units, however, cannot speak one to another, which ensures instant response to the call of the master.

Finding Scope in a 'Closed' Market

IN most well-covered markets there are sections offering scope for new enterprise, particularly for an alert "little man."

A good example of this is found in the radio market where many believe saturation point has been reached. Yet the small firm of Radio and Electrical Productions, Ltd., London, are increasing their sales of radio sets because they listened to retailers' complaints.

Dealers said: "Manufacturers will not give us bargains like those splashed by the big London and provincial stores." So Radio Productions offered sets to sell under retailers' own brand names, at prices which allowed dealers big profit margins.

The price policy has had a vital effect on sales as the retailers have been able to give high trade-in value on customer's sets.

This example shows the value of an intelligent study and understanding of a market. Many small manufacturers could study with success in this manner.

These MANAGEMENT POLICIES Are Solving To-day's Problems . . .

National Need Is Causing Shortage

MANAGEMENT'S problem of finding suitable executive material is becoming acute, particularly in the marketing, sales and office sections.

There are two main causes of the trouble: (1) thousands of young men of industry's "officer class" are taking short-term commissions in the R.A.F. or are being absorbed in the other forces, civil as well as military; (2) expansion in certain industries as the outcome of enormous armament expenditure has attracted men at the expense of ordinary business.

Here's a Management Plan to Beat Problem

THE heads of many firms have recently told us of the difficulties they are facing in this respect.

One director said: "Normally we engage for our sales staff two age groups of men, one lot between 18 and 20, the other between 23 and 25. The young group we train intensively for five to seven years to become specialist salesmen of capital-type products. The older group is trained over a period of a year or so to sell less costly and more ordinary-type products."

"Both these groups are normally composed of men educated at public schools or good secondary schools. They are the type which is joining the R.A.F. in big numbers."

"Lately," explained the director, "we have had to modify our policy in an effort to get 'recruits.' We are now taking youngsters from 16 to 22 in the first group and men from 23 to 30 in the second group. We have also cut down as much as possible the period of training. The success of this, of course, depends on the individual. Where a man obviously can learn more quickly than the others we provide him with the chance to 'graduate' early."

A Policy That Gets Men With a Future

THAT is one way of dealing with the problem, but it may not be suitable for every firm even in modified form.

The vital point is first to find the men.

The head of a food manufacturing firm said the other day at lunch: "I am now seeing personally every applicant for a sales job. Even the most unlikely men get an interview with me. I am taking as little notice as possible of past records. I am trying to judge each man as raw material from our viewpoint."

By the EDITORS

"I have already had good results from this policy," he continued. "My best salesman to-day is a man who had failed in selling a product similar to mine. My best area supervisor had never handled a sales job till I engaged him."



Successful advertising novelties are not easy to come by but the Radicon combined paper-weight and cigarette-box (see illustration) is an outstanding example of the value of a really good novelty. David Brown & Sons (Hudd.) Ltd., who have been distributing these models among customers, have had to treble their original order.

The models have unusual 'reminder' value. The idea was developed from one of the features of the company's product, 'Radicon' worm reducers. This feature is a cooling system which incorporates a fan and cowl together with a scientific disposition of ribs. These function together through radiation induction and convection.

Explanation of the important technical points involved is difficult and confusing to the layman. But with a model to show the points can be made clear and are easily understood.

"You can sum up my new policy by saying that I look for men with a future with us, not men with an excellent past with any other firm."

It Pays to Pay A Lot For Men

ANOTHER instance which reveals the dearth of good men comes from the head of a firm manufacturing a widely used printing machine.

He said: "I will pay £250 reward to the person who introduces to me a salesman who stays with this firm a year. That may sound extravagant, but it is not. If a man is with us

after a year, he is profitable. If he is profitable then he is worth many hundreds of pounds a year. The £250 is merely a percentage of his profit."

This is a policy which, much modified, many firms could adopt. Indeed, many are using it to-day. They offer rewards of, say, £1 to £10, to any member of the staff who finds a man for the sales staff or for any particular job. The reward is paid, of course, if the man is successful over a stated initial period.

And How Will You Beat This Bogy?

IF this problem of finding men, particularly salesmen, has not bothered you yet, be prepared. There is a chance that the shortage will be general. And it will not be a case of the usual shortage of first-class men; that problem is almost constant.

If you are already facing this problem, what action are you taking to solve it? If you anticipate a shortage, what are your plans to combat it?

We would like executives to tell us of their successful plans and schemes for finding good men for any section of the business. Write to the Editor, BUSINESS, Whitefriars House, Tallis Street, London, E.C.4.

This Price Policy Was Proved Wrong

A NUMBER of business men have written, commenting on the price policy problem discussed in these columns in the April issue (page 13). An interesting view was put forward by Mr. A. S. Wooster, director, Castle Brothers (Furniture), Ltd., furniture manufacturers. His letter is published on page 15.

Another example of the intricacies and uncertainties of the price problem was quoted to us a few days ago by the chairman of a nationally known firm.

Some time ago a company put an electric shaver on the market here at £5 5s. Sales were slow. That was partly because the shavers were novel. But after about two years' "educative" work sales still remained small. A price adjustment was made to £4 17s. 6d. This stimulated sales slightly.

About two years ago there was a change in management. The new directors made a complete market investigation. This disclosed the fact that the price was far too high for mass sales. Accordingly the price was cut to £3 3s.

Since that time sales have gone up enormously. From sale by the hundred, the shavers now sell by their thousands.

THE point here, of course, is: Why did the company try to sell the shaver for such a high price in the first instance? They are now making a substantial profit at the present price; (Continued on page 45)

How FUNCTIONAL Organization makes Management Flexible . . .

IN every organization it is found at some time that new blood drawn from other sources does it good. The man at the top, after a spell of success, often grows dogmatic. He tends to dwell on past achievements and omits to seek new ones. Result: sales and profits attain a stagnation point.

In economics there is a law known as organic growth. All well-managed businesses grow along what is known as the "S" curve. Starting from the bottom of the S, they ride up slowly until they attain their momentum at half way; then, reaching their apex, they take a breathing spell. If the spell be not too long, and new plans are devised, good: another S will be superimposed. Otherwise the business begins to go down surely but gradually.

Periodical shake-ups are, therefore, necessary. They bring into daylight inefficiencies. These are readily spotted by the new executives.

Regardless of how successful a business may be, every new executive must analyse his business, find how each problem must be handled. No business problem can be solved by saying: "This is the way to do it!" Ask: "Is this the best way to do it?"

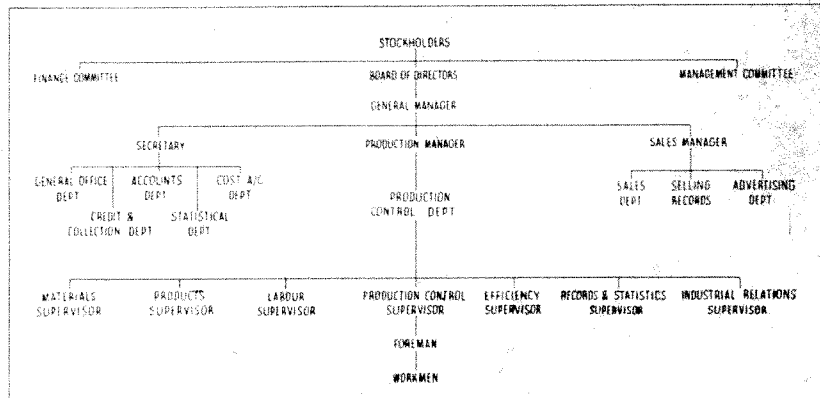
Problems Should Be Handled In This Way

But approach from this angle is not enough. Remember, no business problem can be solved in an off-hand manner. Each must be approached from the scientific viewpoint. The principal points are: (a) the problem in hand must be specified and defined from all others in the general field in which it has arisen; (b) good and bad points of the problem must be clearly sorted out; (c) all available information about the specific problem must be collected.

Having done this, the next work is to analyse and interpret the information and then draw a logical conclusion. Searching into a problem often draws from it certain psychological results which prove invaluable.

Those in charge of the departmental activities in a company should not wait for an important change in administration before making an analysis of conditions. Every organization goes somewhat stale at one time or another, and it is well to take stock occasionally. Just as a plant clean-up campaign helps to get rid of useless accumulations, so a searching study into conditions within a department reveals outdated practices.

But—and this often happens—the



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says

E. F. BRAYHAM

Economist and Business Consultant

effect of a clean-up in a plant or office wears off, and "follow-up" methods must be used to conserve the gains. Likewise, an analytical study of conditions does not leave the management free to sit back in contentment. A continual effort must be put forth for better methods, increased production, greater sales, lower costs and greater profits.

Where the organization is large enough, a research department should be set up for systematically solving known problems and others discovered during inspections. But to have a research department pay for itself there must be full co-operation from departmental heads. They should freely present facts, accept suggestions and should not fear being over-ruled.

Some time every new executive is beset with the problem of what is described as "functionalization." Formerly an organization was built round the individual; experience has taught the wisdom of building round the main functions of a company. This idea (see chart) is a complete break from the system of building around individuals. Functions can grow and develop ad

infinitum, but there are mental and physical limitations to the development of any one person. That is why today's method is always flexible. Functionalization is merely the logical grouping of similar and complementary operations or activities. For instance, all activities relating to the field of finance comes within the accountant's group; all activities relating to manufacturing are included under the general manager's group.

Correct application of the principles of functionalization and departmentalization makes for flexibility and stability of the organization. And delegating responsibility does not ban combining two functions when conditions so warrant.

Flexibility should be the keynote. It is at present fashionable to decry departmentalization since it is said to create bureaucracy. Yet would any executive care to shoulder the responsibility of all departmental heads? The advantages to be gained by definitely fixing departmental responsibility is greater. It ensures discipline and maintains activities.

These Committees Make All New Staff Feel 'At Home' Immediately

COMMITTEES for each department are being used in a number of firms for the purpose of acquainting new staff with various phases of the business.

One, two, or three employees volunteer to spend some time with each new man to show him around. Committees explain dates and methods of pay, office and house rules, point out rest rooms, wardrobe facilities, introduce employees to fellow workers, conduct them to lunch rooms, the library, doctor's office, and other places of interest.

Only picked employees are allowed to

serve on committees. They are usually trusted men, known to be well acquainted with company policies and methods, who have demonstrated loyalty and the right spirit.

This sort of introduction gives new staff the right start. They are made to feel "at home" immediately. Too often it is nobody's business to look after the newcomer—a state of affairs which frequently leads to lasting harm.

A point of good management is to see that every new member of the business settles down quickly and comfortably.

Air Travel

Gives Management CLOSER CONTROL over Men, Markets and Materials

ONE of the key factors in good management is control over all activities in a business. Every development which enables executives to exercise closer control in any way is an asset which should be used in full. Have you looked at air travel in this light? It is an aid to better management. It provides means for management to maintain personal and direct control over the scattered interests of a firm, over men, markets and materials. Most firms can use air travel at some time; many can use it constantly.

The great air lines, aware of the value of air travel to business, are encouraging it by providing special facilities. For instance, Imperial Airways have introduced "bulk travel." This is a method of saving money by firms whose representatives make a habit of travelling by air. The firm obtains a book of air travel vouchers to cover air tickets and excess baggage.

The cost of the journeys is payable monthly. Journeys to a value of £200 made within a year qualify the firm for a rebate of 15 per cent, either paid in cash or credited against further travel. Bulk travel vouchers are accepted by all European air transport companies which are members of the International Air Traffic Association. Special arrangements can also be made on Imperial Airways' Empire routes.

This Plan Means Economy In Buying Tickets

Another facility is provided by Season Travel Vouchers, a convenient and economical scheme for regular passengers on European routes. The sum of £63 15s. will buy tickets to the value of £75 over a period of six months, and £170 to the value of £200 over a period of twelve months.

Special charter use of air travel is another facility offered. For example, the Ford Motor Co. in this country last year made the annual visit to the Continental depots by officials for the first time by air.

In two aircraft chartered from Imperial Airways, Lord Perry, Chairman of the company, and a number of executives completed a spectacular 6,000 miles' tour of their European organization. In 18 days they visited the Ford plants in France, Italy, Greece, Egypt, Austria, Czechoslovakia, Germany and Holland.

Every week provides examples of aircraft being chartered for urgent busi-

By
JOHN STAFFORD
of
Imperial Airways Ltd.



One of Imperial Airways new 'F' class, the fastest type in Europe, has been used since April, eight services daily in each direction, London—Paris. The scheduled journey time is 70 minutes, but was recently done in 53 minutes, a record.

ness purposes. The other day a well-known London fashion house hired a fast saloon 'plane to take their buyers on a lightning trip to a number of cities in Eastern Europe. Recently a London firm of electrical engineers chartered a 'plane to rush one of their directors and several technicians to Calcutta to deal with a big contract being negotiated there.

Facts show what a £1,000 a year man can, by flying, save in business time. £1,000 for a year of 260 working days means a 10-hour day working out at 8s. an hour. The air journey from London to India, for example, occupies four days, the fare being £85. The journey by steamer occupies 14 days; the average fare is about £60. Travelling by air, the executive loses only 40 of his working hours, the equivalent of £16 in salary. If he goes by steamer he loses 100 working hours, the equivalent of £40 in salary.

When surface transport only was available, local managers and technicians at mines and factories overseas could not spare the time to visit Britain except at long intervals. They came home perhaps once every two or three years. Nowadays executives thousands of miles away come to London regularly for the annual meetings of their companies. They also make rapid trips home for consultation on new projects, and so on.

An actual example of closer control of overseas business comes from the head of a well-known firm of bakers' sundriesmen. He had put off visiting Australia, where his firm has interests. He could not afford to be away from the head office for several months. Then he decided to make the journey by Imperial flying-boat.

This took him nine days. He spent a week in Australia and was sitting in his London office again within 26 days.

The single journey to Australia by boat takes over five weeks.

Travel times by air are constantly being cut down. Some months ago a number of buyers in the wholesale trade in South Africa made a comprehensive tour of Europe by air. They found that, comparing air fares with the cost of first-class sleeping cars on European luxury trains, their flying itinerary had actually cost them less than would have been the case by surface transport.

Many business men when on long-distance air journeys leave main routes to make flights over auxiliary or feeder services. In outlying regions where no established routes are available they arrange to be picked up by special taxi 'plane. It is this combination of main air routes, auxiliary services, and specially chartered aircraft that is cutting time and costs for scores of firms.

No Fatigue To Waste Any Business Time

One important point about air travel is this: Business men who, because of sea voyages, arrived at destinations in a bad state physically, can now travel in complete comfort and be ready to talk business immediately on arrival.

Complete encirclement of the globe by British commercial aviation will not be long delayed. In the near future the Tasman and the Atlantic services will start, and there will be a continuous route from Canada across the Atlantic to England and straight through to Australia and New Zealand.

When these services are established it will be possible for the management of a firm to exercise direct, personal control over any section of their business and interests in any part of the world.

In the meantime there are hundreds of companies that could use existing air travel facilities to save time, cut costs and make management more effective.

How Earlier Financial Statements Increase Management's Control

MANAGEMENT is becoming increasingly aware of the desirability and practicability of earlier financial statements. Executives feel keenly the need of early information for the formulation of important policies and for enhanced control of the sales, production, credit and other departments.

Recently a large industrial company advanced its balance sheet presentation date by seven days and thus reduced accounting costs over £50,000 annually. A number of similar cases indicate that an accounting department which still produces financial statements after the 20th of the month can cut its own cost of operation by 20 to 50 per cent.

For example, during the first six months of 1938 a big London company succeeded in changing the date of presentation of monthly statements to executives from the 25th, or later, to the 8th or 9th of each month. More particularly, the time taken by the main office from the receipt of mill data to the presentation of statements was reduced from nine days to one day. The size and cost of the main office

accounting staff were decreased 50 per cent in the course of these changes.

In brief, the essential devices that made possible the improvement in main office procedure were: (1) the development of a general ledger staff, each member of which is fully trained in every aspect of closing work; (2) the organization of the accounting department along "group responsibility" lines; (3) the arrangement of the chart of accounts to make possible a compact general ledger quickly transformed into a balance sheet and income statement; (4) the arrangement of original records and working papers so as to permit a great deal of the closing work to be done in advance of the closing date; (5) the arrangement of working papers and ledgers to allow for the division of the closing work among as many accountants as are trained and available; (6) the elimination of such traditional bottlenecks as the trial balance book or the intra-company consolidating schedules; and (7) the rationalization of clerical and accounting procedure and personnel, and the elimination of unnecessary records, to facilitate early closing of books of original entry.



Cut Premium Costs

MANY manufacturers are obtaining substantial discounts off their fire insurance premiums because of the additional safety provided by A.R.P. equipment and personnel.

In organizing A.R.P., proper extinguishing apparatus is an essential. A.R.P. squads also have to learn firemen's duties. This provides a suitable opportunity to bring the supply of extincteurs, buckets, etc., up to or above the standard required by the insurance companies.

One manufacturer who bought a motor engine and trained his A.R.P. men to operate as a works' brigade, has reduced heavy premiums by 10 per cent. A small increase in the number of extincteurs has qualified for another 5 per cent discount.

As A.R.P. measures must be undertaken, firms should certainly investigate any possibility of saving on insurance premiums.

Guard Against These 'Prophets of Doom'

THERE are always prophets of doom wailing in the economic, social and political world. Business leaders should be on their guard against the destructive influence of these soothsayers.

A case in point was quoted recently by Lord Stamp in a speech at the annual meeting of a building society. He said:

"It is now two years or more since the prophets began to discuss the end of the building boom. . . . There is no trace in our accounts of this recession in activity. . . . Even when the main rehousing movement is stabilized there will always be the demand arising upon renewals of existing fabrics, upon changes of ownership to new holders, and above all upon an extension of the principle of house ownership to a wider proportion."

This is a sane and balanced outlook which is worthy of every business man's respect. If more notice was taken of business indicators of this type and less of the so-called "danger signals" every executive would find business better.

Your Staff Will READ This Type of House Magazine

EVERY editor and writer knows that people are primarily interested in themselves. A well-known house organ editor points out that any company big enough to publish its own employees' magazine, has many employees whose life history is adventuresome, exciting, unusual, or sensational and dramatic.

Instead of filling the magazine with usual preachments about being loyal to the company, this editor conducts all sorts of surveys and check-ups which develop into interesting and readable articles about the employees.

For example: He started out to find the employee who was born the greatest number of miles distant from the factory; he found a young man who was the son of a mining engineer, who had been born in South Africa while his parents were there on a mining mission.

A story about this young man's early environment made a yarn good enough for publication in a national magazine. On another occasion he determined to

learn where each employee was born. Many countries were represented.

For some time he has been running a series of articles on employee hobbies. Another series dealt with employee education. He found employees who had attended universities in Paris, Heidelberg, Moscow, Vienna, and almost everyone of our most famous schools in Britain. Soon he plans to write a series on the most widely travelled employees. Few phases of human activity are missing from the list of things company employees have done or have tried. Their stories, he declares, are fascinating, human material, which, when printed, helps all employees understand and appreciate each other more and more.

He has found that close contacts with employees which result from these interviews reveal unsuspected abilities in employees. He found a receptionist who had outstanding ability as an artist, and was able to bring about her transfer to the advertising department and arrange for her to begin night study at art school.

'Staggered' Pay-days to Help Management?

THE suggestion that pay-days should be "staggered" has recently been raised and should command the attention of management. The idea has much to commend it from the viewpoint of business administration. And there are, of course, other and more obvious social and economic advantages.

In a letter to the Editor of *BUSINESS*, Mr. Graham Cunningham, Managing Director, "Triplex" Safety Glass Co., Ltd., discusses the question. He says:

"The National Amalgamated Union of Shop Assistants, Warehousemen and Clerks recently urged that pay-days should be 'staggered.' They argued that because, by tradition, most people are paid on a Friday, there is a shopping rush and consequent congestion on Saturday, particularly in the suburbs of London and the larger provincial towns.

"The subject is obviously of importance from the point of view of the shopkeeper and shop assistant, but it is also of considerable interest to the large employer of labour.

"In the case of a large business, especially where piece-work is involved or wages paid on hourly basis, a definite advantage might be shown by paying employees in each department or group of departments on a different day. Such an arrangement would enable the work of preparing and checking wage-sheets and filling the various pay-envelopes to be spread over the whole week and the



normal struggle to get ready for the weekly pay-day avoided.

"To begin with, however, it would not be advisable to apply the scheme unconditionally. The lower-paid workers, working in many cases on a very narrow financial margin, would obviously prefer to get their money at the week-end, since Saturday is the day for recreation and purchasing provisions for the week-end. In these cases it would probably be better not to pay wages earlier than Wednesday.

"In the case of higher-grade artisans, 'black-coated' workers, civil servants, and so on, there is no reason why the pay-days should not be spread over the

whole week. In large organizations the best system would seem to be to pay clerical and higher-paid workers on Monday, Tuesday and Wednesday, and the lower-grade workers on Thursday and Friday.

"The banks would welcome 'staggered' pay-days. In busy districts there is heavy pressure on bank staffs between eleven and two on Friday, and to a lesser extent on Saturday morning, when the counter is besieged by the representatives of a number of different firms all endeavouring to draw money for wages, while private customers are crowded out. There is an atmosphere of strain and a liability to make mistakes; bank cashiers would, I believe, welcome any device whereby this state of affairs could be avoided.

"Where it is not practicable for a firm to spread payment of wages over more than one day, the scheme would be put into operation by different employers paying wages on different days.

"The problem of organizing 'staggered' pay-days within a given area admittedly presents difficulties, but by invoking the aid of a local Chamber of Commerce or other appropriate institution it should be quite possible to divide the majority of employers into groups, each group paying employees on a different day of the week.

"It seems, therefore, that a scheme for 'staggered' pay-days would benefit three sets of people—shopkeepers, large employers of labour, and the banks. The difficulties in the way of application do not seem insurmountable, and the advantages are so great that it would be worth while giving it a trial."

What are your views about "staggered" pay-days? We would be pleased to have letters on this subject, discussing reasons "for and against."

"Sell to Your Buyer at Lowest Price Possible" says A. S. WOOSTER, Director, Castle Bros. Ltd.

PRICE policy problems undoubtedly attract a good deal of management's attention. There is evidence of this in the letters and comments which followed discussion of the subject in the April issue ("Price Policy is Always a Poser"—page 13).

One of the most interesting letters on the problem came from Mr. A. S. Wooster, director, Castle Brothers (Furniture), Ltd., High Wycombe. As Mr. Wooster's point of view will be of interest to other manufacturers, we publish his letter. Here it is:

"I read with interest your 'Price Policy Poster' in the April issue of *BUSINESS*, and in replying one cannot forget the many points that go to make up the final price of any manufactured article. It appears to me to be quite different in the case of the large factory compared with the small factory producing the same article. I feel that one must sympathize with the responsibilities of both.

"Firstly, 'A' may be the large factory with its big overheads, while 'B' can be

the very small factory with very small overheads. (Although I hasten to add that 'A's' mass-producing system and modern organization may easily account for its larger overheads.)

"Then 'A' may be a very large public company with annual responsibilities such as dividends, etc., to find, while small factory 'B' may be privately owned, content with a 'substantial living'.

"Again, 'A' being a large factory has probably been in existence many years. The firm have already created that good reputation which enables them to ask a better price for the article and easily get it. But 'B' must make his price his selling factor, having not been in existence sufficiently long enough to build up a reputation equal to that of 'A'.

"One could go on with these comparisons, or rather differences, as to why this factory must do this and why another factory can do that. But let it be large or small, there seems to me to be but one thing to do—to determine: At what price must I produce

the article to meet competition?

"Then I must organize my business so that I can produce the article at the price to meet this competition. In so doing I must make certain that my net cost to produce includes *all expenses* to produce. I emphasize this because it is so very essential. I must then make sure of my margin of necessary profit. This without doubt gives me my selling price.

"I am now in a position to create my market and reputation. I must not be led away by what others may charge. I only know my own business, and in knowing my own business I must be confident that I can meet my responsibilities.

"This brings me to my conclusion and so helps me to reply to your poser.

"Sell to your buyer at the lowest price possible to enable you to meet the demands made to you. In so doing you should gain the confidence of all you do business with and so build up or keep that good reputation essential to all businesses, large or small."

Is this the point of view and practice of most firms to-day? We are interested to get your view on this problem and for or against the policy explained by Mr. Wooster.

Here Are 50 Key Points In The New Civil Defence Bill

That You Must Know and Act Upon

A.R.P. is now a legal not a moral duty, and every business executive should examine carefully the provisions of the Civil Defence Bill. To omit observing the provisions of the Bill may result in heavy penalties. In any case, whatever your point of view, you are *compelled to conform to the provisions within specified times.*

Here we give 50 of the main points in the new Bill. They will provide a guide to what measures you must take whether you are an occupier of a factory, an owner of a mine, or an occupier or owner of a commercial building.

The specific points that affect owners are set in italics, those that specifically concern occupiers or tenants are set in bold type. All the rest of the text which is set in ordinary type applies or is of interest to two or more classes of business men.

While we urge you to study these 50 points, we cannot, of course, be responsible for their legal accuracy. That is a matter of test by law. The validity of an interpretation that individual executives and firms put on any point in the Bill can only be established by the precedent of a judgment on that point.

When you have studied the points given here, read the full text of the Bill. You will then understand clearly what are your specific responsibilities.

The Main Provisions of The Bill Are These

(1) **F**ACTORIES, mines and commercial buildings in areas specified in an Order to be made by the Minister for Civil Defence are all affected by the Bill. The Minister may specify any factory wherever located as if it were in such an area.

(2) A code describing types of shelters suitable for different cases has just been issued for guidance of business men.

(3) Occupiers of factories, owners of mines and commercial buildings must make reports (to the district inspector of factories, the district mines inspector and to the local authority respectively) stating measures they have taken or are taking to provide air raid shelter for employees. Reports on completion of shelters must also be made.

(4) First reports must be made within three months of whichever of the four following dates is the latest: (a) the passing of the Act, (b) the first issue or approval of the code of approved types of shelters, (c) the making of an order applying the business sections of the Act, (d) fulfilment of conditions specified in the provisions of the Act. In effect, you must make your reports by June.

(5) *Owners but not full occupiers of commercial buildings must serve notice on every lessee or occupier of any or all parts*

of the building of intention to provide an approved shelter.

(6) Occupiers of factories, owners of mines and owners of commercial buildings irrespective of the limitation of interests are authorized to provide approved type shelters. They are not liable to pay damages for anything done which is reasonably necessary in providing shelters.

Any air raid shelter constructed must conform to the requirements of the code.

(7) Factory or mine inspectors and local authorities respectively can serve on factory occupiers, mine owners and owners of commercial buildings written notice to provide approved type shelters. The type of shelter may be specified in the notice. This notice may be served whether or not you have already made a report on what you have done or propose to do.

part of the building, (2) each occupier of the building.

(10) Lessees or occupiers can appeal against the notice on claims that (a) the proposed shelter is not of the appropriate approved type, (b) an air raid shelter is not necessary in the building concerned.

(11) Occupiers of any part of a building can claim compensation from the owners for interference with the use of his part of the building.

(12) *The owner of business premises can increase rent to pay for the cost of building shelters for occupiers. The annual rate of increase is set at 1/10th of the expense incurred. Therefore, the cost will be offset in 10 years. No increase may last longer.*

You may, of course, come to some friendly arrangement with your landlord

'Factories, Mines and Commercial Buildings' As Defined in the Act

HERE are the definitions of factories, mines and commercial buildings within the meaning of the Act.

The expression "factory" means the same as that meant in Section 15 of the Factories Act, 1937. This includes even those places formerly defined as workshops.

The exceptions are:

(1) No premises occupied by the Crown.

(2) No factory entirely situate in a building not wholly occupied by the occupier of the factory.

(3) Any part of a factory situate in a building not wholly occupied by the factory occupier; it is deemed not to form part of the factory.

But any factory where more than 50 persons work, including the remainder of any building which is partly occupied by the factory as well as any contiguous land and any buildings on that land, is held to be "factory premises."

The expression "mine" means the same as that meant in the Coal Mines Act, 1911, in the Metalliferous Mines Regulation Act, 1872, and in the Quarries Act, 1894. In any case it means a mine or quarry in which more than 50 persons work. It is not a mine or quarry which forms part of factory premises.

The expression "commercial building" means a building in which more than 50 persons work.

Excluded are buildings wholly or mainly occupied as a school, college, hotel, restaurant, club, place of public entertainment (cinema, theatre, etc.), hospital or nursing home. Also excluded are buildings wholly occupied by public utility undertakers.

No building which forms part of any factory premises is considered a "commercial building."

The greatest number of persons at work in or about your premises at any one time in a normal day is the number held to be employed. This includes employers as well as staff.

(8) Such a notice may specify the time allowed in which the shelter must be provided. The time begins 28 days after service of the notice or, if an appeal is made, from the date the appeal is determined.

Non-compliance with notice to provide shelter means up to £100 fine and up to £50 a day after conviction for failure to comply.

(9) *When a notice is served on an owner of a commercial building who does not occupy the whole of the building he must, within 14 days, serve a copy of the notice on (1) every lessee of the whole or any*

on building shelters and offsetting their cost, but the legal position is as stated.

(13) *In the case of part-leases of a building the increase is determined by the proportion borne by the annual value of the part of the building at the completion of the works to the annual value of the whole building. For instance, if the annual value of the part of the building concerned is £1,000 and the annual value of the whole building is £10,000, the proportion is 1/10th. If the cost of shelters is, say, £200, the extra charge on the rent will be £20, a tenth. Spread over 10 years, this means £2 a year rent increase.*

(14) The extra rent payable starts in the first rent period—monthly, quarterly, or whatever it may be—after completion of the shelters.

(15) The expenses of providing shelters include compensation paid by the owner to tenants and the compensation which he, the owner, as part occupier, would get had he not been the owner.

(16) If the notice is not served properly or there is no reasonable chance to appeal against it, and the occupier has suffered damage, a reduction in the rent increase may be made.

(17) Any surety for payment of rent is liable for any increase.

(18) An owner cannot claim expenses under any lease requiring the tenant to pay outgoings or any similar term.

(19) Unless it is not in keeping with the Act, any business man may go ahead with air raid shelter plans. There is nothing against that in the Act.

(20) Factory occupiers, mine and commercial building owners (providing the owner occupies part of a commercial building) will get a grant (equal to the standard rate of income-tax for the year 1939-40) on the capital expenses incurred as the Minister considers reasonable.

(21) Commercial building owners occupying only part of the building get a grant only of "an amount bearing thereto the same proportion as the annual value of the part of the building occupied by him—bears to the annual value of the whole building—"

(22) Every business man who incurs capital expenses in "providing or securing" air raid shelters for staff gets a grant on a basis similar to that already mentioned.

(Public utility undertakers are not included in this section. There is one specially to do with them.)

(23) No grants will be paid unless shelters are complete or nearly so by September 1939.

(24) Only expenses which are reasonable according to a standard to be set by the Minister, will be accepted.

(25) Shelters already built qualify for the grant, providing, of course, they are of an approved type. As most firms who have already undertaken A.R.P. work have obtained some sort of official approval of plans, they can claim a grant.

If you Employ Over 50 Persons, Study This

SECTION 18 of Part III of the Act concerns employers of more than 50 persons.

(26) If you come in this category you must report in writing to the local factory or mines inspector or the local authority (whichever is appropriate in your case) on measures you have taken or are taking to train employees in A.R.P. This includes steps taken to train first-aid, rescue, decontamination and fire-fighting squads, as well as routine to be followed by the mass.

(27) The report must be made within a month of when "this section first applies" to you.

(28) The authorities concerned may not be satisfied with the measures you have taken. In that case you will be served with a notice specifying what other measures you must take.

You have the right to appeal against such a notice within 14 days of receiving it. The decision of the Minister on the appeal is final.

(29) If you fail (a) to make a report or (b) to comply with a notice served you can be fined £100 and £50 a day so long as default continues.

This zig-zag trench type shelter at Leyton, with walls and roof lined with reinforced concrete 6 in. thick, protects 200 persons. Many firms could use trench shelters



This Section Affects Mines and Factories Specifically

(30) **P**ART VI of the Act deals with "Obscuration of lights and camouflage" and affects factories, mines and public utility undertakings. It stipulates that in war throughout any period of darkness (1) no light is allowed to appear, (2) no lights not within a building remain alight.

(31) In the case of (2) lights essential for the conduct of work of national importance which cannot be put out must be shaded and dimmed. They must be capable of instant extinction unless otherwise ordered by the Minister.

Here, again, the appropriate inspectors or other officials may serve a notice requiring to take specified measures.

(32) In cases of flames or glare, as from a furnace, which cannot be screened as can ordinary lighting, the Minister or other appropriate authorities can serve a notice specifying the measures to be adopted.

The measures for obscuring this kind of light are not mentioned. The authorities will decide what must be done and whether complete or partial screening must be carried out.

(33) Mine owners may get similar notices in respect of slag heaps, etc.

(34) Measures to be taken for camouflage of premises will also be specified by notice served. Any factory or public utility building which has features easily recognizable by aircraft will have to undertake camouflage.

Although there are no stipulations for immediate action on screening and camouflage, business men concerned should investigate the problems now. The A.R.P. Division of the Home Office have already carried out extensive experiments in both subjects. The information gained is at the disposal of business men.

(35) Grants will be made to firms carrying out screening and camouflage. Grants will not exceed half of capital expenses involved.

(36) Failure to comply with notices served may mean £100 fine and £50 for each day on which the offence continues.

Here are Miscellaneous Points to Keep in Mind

(37) **A**NY materials, equipments, appliances, etc., supplied free of charge by authorities to business premises remain Crown property. They must be preserved by the firms concerned. Penalty for failure in this respect may be £5 fine.

(38) Damage caused by removal of appliances, etc., by the authorities must be made good by them.

(39) Employers are not liable for compensation or damages if an employee is injured in training or exercising in A.R.P. work. The Government have a scheme for paying injured persons or their dependents. (This may be revoked or varied by a subsequent scheme.)

(40) One or more official arbitrators will

be appointed to decide on any question of compensation.

(41) Appeals may have to conform to rules specifying how they are to be brought. Persons may be appointed to inquire into and report on appeals; such persons may take evidence on oath, administer oaths, require attendance of witnesses, production of documents and authorize punishment on summary conviction of those who do not comply with any such requirements.

(42) Any person who makes a false statement is liable to £100 fine and/or imprisonment for three months.

(43) Directors, managers, secretaries and other officers of all firms are held responsible individually as well as collectively under the Act. Where an offence is punishable, each can be punished.

(44) Factory and mines inspectors or authorized persons from local authorities have the right to enter your premises "at all reasonable hours" on producing an authenticated document. These officials can enter (a) to ascertain if there is or has been any failure to comply with the Act, (b) to see whether any action needs to be taken under the Act and (c) to fulfil their civil defence duties.

When you have studied these points, read the two A.R.P. articles on pages 18 and 19. These deal with the problems to be faced and how they can be solved.

(45) Any document served under the Act may be served by delivering it to the person concerned, by leaving or sending it to the last known address or place of business, by delivering it to someone on the premises or by affixing it to some conspicuous part of the premises.

(46) Local authorities may take over part or whole of any building for use as (a) an air raid shelter, (b) for carrying on defence functions. Authorities will post a notice, making clear to the persons concerned what is to be done.

(47) Within 21 days appeal against designation may be made to the Minister for Civil Defence.

(48) If you are an owner or occupier of any industrial or commercial premises you should check up with your local authorities on this point. If your premises are designated they may not be altered structurally without the consent of the local authorities. Even adjacent buildings and land must not be touched. For any alteration that is held to make your designated premises unsuitable for public purposes, the local authorities may charge you for making the premises again suitable.

(49) If works are executed on your premises by local authorities you may get compensation for interference with your use of the premises.

(50) For underground shelters, local authorities can acquire compulsorily as much surface and subsoil as is necessary.

A.R.P. Problems Must Be Handled By TOP EXECUTIVES

NOW that firms are by law compelled to provide adequate shelters for staff and are responsible for A.R.P. organization of employees, the whole problem of A.R.P. must be thoroughly investigated by top executives. It is no longer an incidental activity to be directed by junior executives. The decisions to be taken are important and may involve expenses running into thousands of pounds.

The problems to be solved immediately are (a) what measures are needed, (b) how can decisions be put into effect quickly, and (c) how much will total A.R.P. schemes cost.

Before any of these questions can be answered executives must understand clearly the factors involved in passive defence. Not only that: they must have qualified technicians draw up plans and give advice.

Eight Big Dangers To be Guarded Against

A shelter must afford protection against at least eight dangers: (1) splinters, (2) blast, (3) falling debris, (4) gas, (5) machine-gun bullets, (6) incendiary bombs, (7) falling fragments of shell cases, (8) percussion or delayed-action high explosive bombs.

The extent of danger of course from each of these varies. Splinters of bomb cases, for example, or stones hurled about by an explosion, are dangerous within a radius of 1,000 yards. A bomb splinter will crash through an ordinary wall which is within 50 ft. of where, say, a 500 lb. high explosive bomb falls. At least 12 in. thickness of reinforced concrete is necessary in an above-ground shelter to give a margin of safety under such conditions.

Obviously more protection from this type of danger can be obtained from underground refuges. Where a shelter is below ground level and has a 2 ft. to 3 ft. earth bank with a slope of 45 deg. or under, there is little danger of fragments penetrating.

The effects of blast are now fairly well understood. Within a radius of about 100 ft. the shattering force of an explosion is intense. The wave of pressure which results destroys or damages windows, doors and light walls within a 500 yd. radius. Although the pressure may not seriously damage buildings over 50 ft. from the explosion, shelters should have some protection against it. A masked entrance, for instance, is desirable. If a refuge is not below ground, streamline construction is helpful. Sloping earth banks, for example, will nullify the effects of blast under such circumstances.

One of the cardinal points in shelter construction is to choose a site at a reasonable distance from other buildings. Near-by structures may be blown up or shattered by blast, and the mass of falling debris which results might easily be fatal. Of course, where a shelter is built inside an existing building the problem is to provide adequate roof protection. Then, if the structure above collapses, the debris does not crash through into the shelter.



Reinforced concrete electricity sub-station at Watford (top) protects machinery worth £15,000; cost £2,100 to construct. 'Key men' concrete shelter (middle) is at an ironworks, Nottingham. Has airlock; filtration plant; accommodates 50; costs £250. Bomb-proof stronghold for 750 persons (bottom) forms foundation of new factory at Brentford. Reinforced concrete walls 2 ft. 6 in. thick divides shelter into compartments. Accommodation includes decontamination centre, first-aid station, surgery, bathrooms, dressing rooms, wardens' annexe, control room, engine room

There are four main factors for management to deal with. They must:

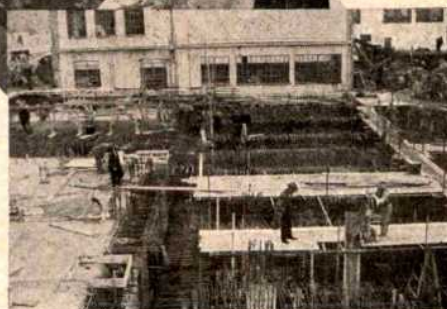
1. *Determine dangers to be faced*
2. *Decide on measures to be taken*
3. *Schedule how to get work done*
4. *Keep detailed control on costs*

fall. Effectiveness of incendiary bombs, therefore, depends largely on the materials used in your buildings and the goods there. A shelter with concrete roof about 5 in. thick, for example, will resist the attack of a light incendiary bomb.

It has been pointed out by experts—and confirmed by experience in recent wars—that complete protection against direct hit from big high explosive bombs is difficult and costly to obtain. The best protection so far discovered is to tunnel underground to a depth of 50 ft. or so. But much depends on the nature of the subsoil.

Such deep excavating is prohibitive to ordinary firms and not necessary. The chances of a direct hit are small.

Practical Examples of Shelters



Forced ventilation, gas curtains and gas locks are some of the means of protection in shelters against gas attack. But the danger of gas attack varies according to the locality. In heavily populated areas, for example, the risk of such attack is much higher than in, say, a country district.

A more probable danger is that of being attacked with incendiary bombs. These are likely to range in weight from 2 lb. to 25 lb. There is little explosive force in these bombs; their work is to set fire to materials on which they

But something approaching full protection from a 500 lb. bomb can be obtained at reasonable cost. Five factors are involved: (1) a detonating slab, (2) a cushion of earth, sand or rubble, (3) a distributing slab, (4) a second cushion of earth, and (5) a substantial shelter roof.

The need for costly shelters of this type depends on many considerations—the location of the factory, the value of the neighbourhood as a military objective, the nature of the work carried on,

(Continued on page 42)

How to Construct a Shelter in Your Factory or Office

THERE are five main ways to provide adequate protection for your staff: (1) converting an existing building, or part of it, to a shelter; (2) using trenches or other outside shelters; (3) using galleries (of the type used in mines) where these exist or can be built more easily than trench refuges or other shelters; (4) use of dispersal methods; (5) any combination of suggestions (1) to (4).

The choice of one or more of these methods depends, of course, on a number of factors. In many industrial areas the use of trenches and outside shelters is impossible. There is no available ground. It is also unlikely that many firms will have galleries; nor are they likely to find that construction of galleries—if possible—is more economical than the building of special shelters.

These Buildings Are Best For Shelters

It is certain that great numbers of firms occupying factories and commercial buildings will make some use of existing structures. In this, those that occupy reinforced concrete buildings of one or more stories will be the most fortunate. This type of structure is most suitable for containing shelters, because it is: (a) exceptionally strong in structure and (b) well suited to withstand blast and splinters.

These are, of course, vital points. If a building is at all likely to collapse from such attack the danger to a shelter from debris, etc., is naturally great. But this does not mean that any other type of building is unsuitable for containing a shelter. A basement or cellar may have the potentialities of a first-

TABLE No. 1	
TYPE OF SHELTER	SPACE REQUIRED PER PERSON
Ventilated* Example: For 50 persons at 7½ sq. ft. of floor space each—a chamber 10 ft. wide x 37 ft. 6 in. long, or 15 ft. x 25 ft., etc., by any convenient height.	Minimum for standing room only. 3½ sq. ft. of floor per person. Desirable space for reasonable comfort is not less than 6 sq. ft. per person.
Unventilated Example: For 50 persons at 75 sq. ft. surface area each—a chamber 10 ft. wide and 94 ft. long x 9 ft. high, or 15 ft. x 69 ft. x 10 ft. high; etc.	75 sq. ft. interior surface area (walls, floor and ceiling) per person, for maximum period of occupation of 6 hours. For 12 hours occupation allow 100 sq. ft. surface area per person.

* The ventilation system should be capable of delivering a minimum of 150 cu. ft. of filtered fresh air per person per hour.

Table 1 shows at a glance how to arrive at space required for a given number of persons according to whether the shelter is to be ventilated or used as a closed unventilated chamber

rate shelter, despite the building above. That is a matter for technical experts to decide. You should certainly consult them on the point.

Below ground level is the best place, as a rule, for shelters. Lateral protection is automatically secured, and often the cost of providing full protection is low. Basements, for instance, provide extra protection because of the floors and roof above.

It is not possible to generalize on the type of basement that is suitable for a shelter. You may, for instance, consider that your basement is suitable, but the local authorities might object. They are strict on such matters and may veto a plan unless it meets every requirement. Undoubtedly, for specific knowledge of a basement's suitability, you must have the advice of an expert.

Any underground shelter must, of course, be protected against flooding. It should not be below the level of sewers. Entrances constructed above flood level overcome these difficulties.

After you have determined that the basement in your building can be con-

verted into an "approved type" shelter (see the new code issued by the Minister of Civil Defence), what action do you take next? First you must settle the question of capacity, a fairly simple job.

The Home Office recommends 75 sq. ft. surface area (floor, ceiling, walls) allowance per person. This is for an unventilated shelter for a six-hour period of occupation. Of course, if the space allowance per person is increased, the time it can be occupied is also increased. For example, 100 sq. ft. allowance per person extends the occupation period to 12 hours. Needless to say, ventilated shelters can be occupied indefinitely.

'Comfort Space' Is 10 Sq. Ft. Per Person

About 6 sq. ft. of floor space per person is desirable if your shelter has gas-filtration and ventilating plant. For standing room only 3½ sq. ft. is needed. This crowded condition, however, is not recommended. For comfort, 7½ to 10 sq. ft. per person is needed. This is sufficient for all in the shelter to lie down.

There is general agreement that big shelters are undesirable. No one shelter, for instance, should take more than 50 people.

The value of small and medium-size shelters is obvious. They ensure a measure of dispersion, and dispersion itself provides a certain amount of safety. At least a direct hit from one high-explosive bomb cannot wipe out your entire staff. That is why, if you have more than one basement and a staff exceeding 50, you should use all the basements. If you have only one, then it is desirable to sectionalize it.

Staff, of course, should be allocated to shelters nearest their place of work. Accessibility is a key factor. You should carry out tests to find how long

(Continued on page 42)

TABLE No. 2	
Reinforced concrete 5 in. thick may be expected to keep out incendiary bombs* of 1 kilo weight (2½ lb.)	Earth or Sand 30 in.
	Unreinforced concrete (not weaker than 1:6) ... 15 in.
	Stock bricks in cement mortar 13½ in.
	Reinforced concrete (normal) 12 in.
	Reinforced concrete (special) 10 in.
	Mild steel plate 1½ in.

* R.C. 15 in. thick affords protection from 10 kilo (23 lb.) incendiary bombs.

Construction of splinter-proof shelters in the open is simpler than that of designing shelters under buildings. Main structural requirement is sufficient thickness of material to prevent penetration by splinters and to protect from direct hits by small gas and incendiary bombs, falling debris, etc. (See above Table 2)

An alternative to straightforward above-ground reinforced concrete splinter-proof structure of the lean-to or isolated 'pillbox' type, is the curved corrugated iron hut. This has an 8 or 10 in. layer of concrete outside corrugated iron sheets and is covered with a mound of turfed earth. A concrete floor is an advantage in any case, particularly if the shelter floor is sunk a foot or two. These shelters are simple to construct. Component parts, including gas-proof doors, etc., are

• on the market

THE TREND OF TRADE

Marketing—Advertising—Selling

Once Again the Order is— *FULL STEAM AHEAD!*

B RITISH business maintains its strangely paradoxical situation. Half of the business community talks gloomily about "bad times" and "nothing doing," about Budget effects and Hitler's speech; yet trade, the other half maintains, is improving in practically every field outside coal and cotton.

Last month we awaited serious repercussions from the Slovakian crises. There were none. This month every advertising agency in London, every business chief, has been attempting to assess the damage from the Albanian adventure. Most of that anxiety has proved to be superfluous. For, again, nothing whatever has happened to business in general.

These Facts Make The Outlook Rosy

O NLY the luxury trades and industries catering to those in close touch with the Stock Exchange have suffered. Few of us realize how small a fraction of British enterprise is represented. *The steady increase in employment during these two crises may do something to correct our perspective. Actually trade is not bad. It is better than a month ago, better than a year ago, and steadily on the upgrade.*

In sober fact two new crises, the Budget and Mediterranean tension, have not merely failed to upset business but they have left untouched the improvement that set in during February. Simultaneously the full effects of rearmament are just beginning to be felt. The first series of armament, aircraft and material factories are now built; the machines are running; operators are drawing their wages; raw materials are being steadily bought.

Wages Now Give an Impetus to Buying

T HE big wage bills are seeping through to the local shops, thence to the wholesaler, and so on to the manufacturer of consumer goods. It is this doubling impetus to revival that is quickening the whole pulse of economic life.

If February's employment figure was good, that for March is phenomenal. The fall of 169,789 in unemployment is the biggest for ten years (since the boom of 1929). The increased activity is healthily spread through building, coal

By

CECIL CHISHOLM, M.A.,

'BUSINESS' ECONOMIST

mining, iron and steel, agriculture and the distributive trades.

Phenomenal, too, is the output of steel. At 1,170,900 tons, it is less than 1 per cent below the all-time record of November '37. Indeed, we may be in sight of a second steel shortage. Even with the new Ebbw Vale plant, our steel furnace capacity is but 14,483,000 tons per annum. We are perilously near the margin of possible output. Pig iron output still lags behind the needs of the steel furnaces. It is to be hoped that the lesson of the 1937 shortage has been learned and that heavy imports have been arranged for.

Three Factors Behind Rise in Steel Output

T HIS improvement in steel output is not entirely due to armaments. The increase of car sales by 23.5 in February shows one big source of extra consumption; the new increase in building contracts passed and the rapid revival ahead in shipbuilding provide two further big demands for steel.

The effect of the Government subsidies for shipbuilding and for the tramp lines has been magical. More British ships were ordered in the first week after the decision than in the whole previous year. Orders for five-hundred-thousand tons of new ships are said to be issued. But let there be no mistake about the builders' position. These are orders for British ships based on Government subsidy. They will only help the shipbuilders indirectly to get the foreign orders on which their prosperity eventually depends. To win these they must get down their costs. Some change in method will be necessary to achieve this.

Shop Sales Up As Wages Rise

A LTHOUGH shop sales for March are not out, our report suggests that business has been good everywhere outside the luxury centres in London and a few big provincial cities. This is to be expected, despite the

amount of depression talk going on. For not only are there more wage packets coming home, but everywhere wages continue to rise.

I estimate that the general level of wages is now almost two per cent above that of 1937. Better still, retail prices are down, which still further increases the purchasing power of the worker.

Finally there is every indication that money will remain cheap. The slight hardening in the money market is serious only to the experts. The fact that a two per cent Bank Rate has become effective cannot be regarded as deflation by any ordinary business men. Fortunately we have a long way to go before business will be hampered by dear money.

All the Big Factors Are Now Favourable

H ERE is a situation in which all the basic factors are favourable. Every unfavourable factor is of secondary importance. Commodity prices still fall, but the falls are slight, and any improvement in America will arrest them immediately. Even continued improvement here and in Europe will help. The only industry still left entirely in the doldrums is cotton. Eventually the demands of the forces will help but only partially. Perhaps the best thing we in this country can do is to realize the situation.

The cotton industry now employs only 63,000 more people than the car and aircraft industries; nearly 80 per cent of the pre-war export trade has disappeared; the trade does not hope to export more than about one thousand million linear yards in years to come, as compared with seven thousand million linear yards in 1912.

Cotton Industry Now Hopelessly Outdated

W ORSE still, firms hit by the export slump continue to crowd into the already crowded home market. This has been going on for fifteen years. As a result the making of profits is almost an impossibility. Worst of all, 50 per cent of the 180,000 looms in Lancashire are over 35 years old, and masses of spinning mules are still running which ought to have been replaced by ring spinning frames years ago.

If the Enabling Bill makes it possible

IT HAPPENS IN **YOUR** BUSINESS (1).

**"SORRY TO KEEP
YOU WAITING—
they're looking it up"**



An important customer on the 'phone—a vital point is raised which can be settled only by reference to a letter written months ago. The answer must be given immediately—excuses and delay would convey a damaging impression of inefficient organization.

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files are designed to supply required papers in a flash. Visible Records show vital facts 'at a glance'. Desks are designed for individual duties—increasing the individual efficiency of executives, clerks and typists. Cupboards, shelves, multi-purpose counters, worktables—every piece of Shannon Equipment is planned to make work lighter—to economize floor space—and to reduce office costs.

Shannon Planned Efficiency Systems are based upon the world's

largest and most comprehensive range of standardised office equipment, plus fifty years' specialised experience in planning profitable offices for firms of every description. Let us send you full particulars.

FREE! Write for our 28-page booklet, 'LOST MOTION' and learn how you can run your office on a profit-earning basis. It will be sent Free to executives on receipt of business card or letterheading.



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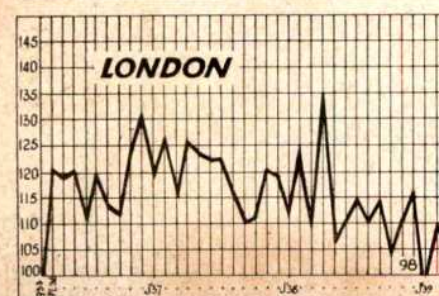
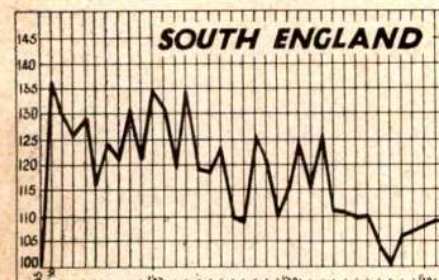
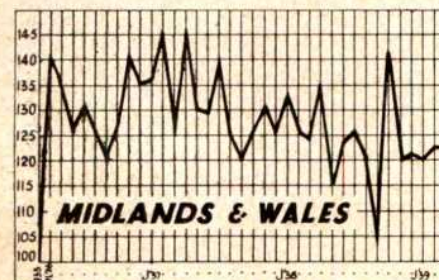
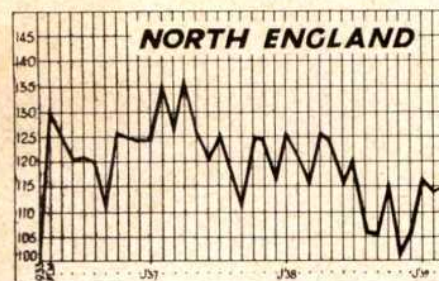
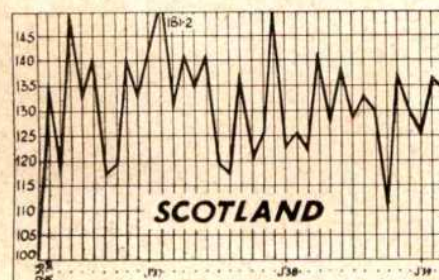
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7325

REGIONAL ACTIVITY

Study these graphs. They show the level of business activity in every area of the U.K. and provide a guide to the trend of business from a long-term viewpoint.



to maintain prices in the home market, that will be something, but the re-equipment and replanning of the whole industry must follow if Lancashire's present diminished export trade is to be held against foreign competitors.

The coal industry remains another factor of depression, but the expansion of armament work is already beginning to help the demand for coal. Profits are also a shade better.

Uncle Sam Still Feels Bit Weak

THE fourth important deterrent to prosperity is the weakness of the U.S.A. markets. If indexes mean anything, business is 40 to 50 per cent better in most parts of the U.S.A. than it was a year ago. More steel is being produced; car output has increased; car loadings are up; agriculture is healthier.

EMPLOYMENT INDICATOR TO TRADE ACTIVITY

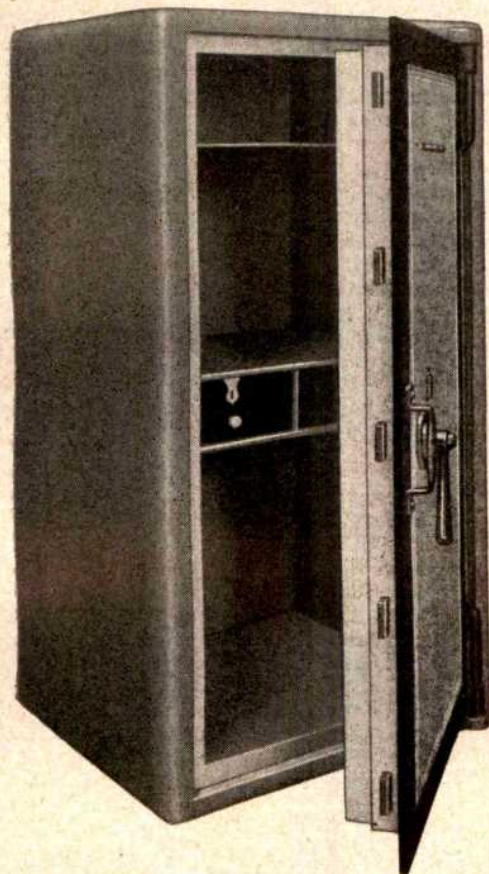


Milners' SECURITY

STRONG ROOMS · SAFES · STEEL ROLLING SHUTTERS · STEEL OFFICE AND FACTORY EQUIPMENT

★ If war should come, it will be of vital importance that the nation's industrial machine should function as smoothly as possible. Now is the time for those in control of business organisations to make every preparation to enable their business to be carried on under wartime conditions. Without adequate safeguarding business may be brought to a standstill. ★

The great practical experience of MILNERS' in combating all known risks is an asset of incalculable value, and technical experts are always available to discuss security problems with those in positions of responsibility.



Milners' GRADE 2 Safes

MILNERS' Grade 2 Safes are universally recognised as the surest security against Fire, Fall, and Impact, hundreds of thousands being in use throughout the World.

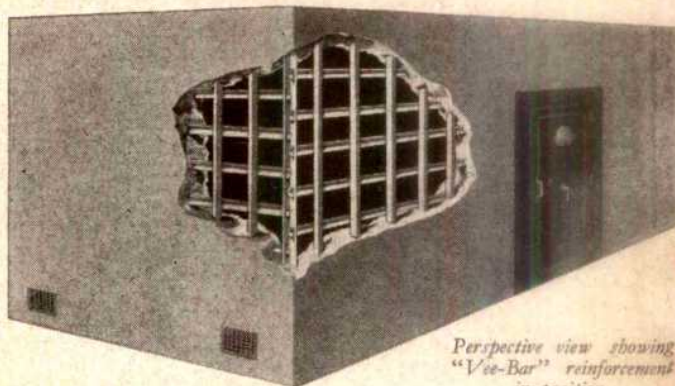
The body of this grade of Safe is constructed of $\frac{1}{4}$ -in. plate, and consists of a single plate bent at all twelve corners, the back plate being welded flush to the body. The Door Plate is of $\frac{1}{2}$ -in. heavy, tough steel, with additional protection over the locks and other vital parts. The lock chamber is constructed of Steel Angle Bar, securely riveted to the inner surface of the Door Plate, and contains the main sliding bolts, which are operated by a strong brass lever handle, chromium plated. The sliding bolts are controlled by a best quality EIGHT-LEVER UNPICKABLE LOCK with duplicate keys, the lock mechanism being protected by MILNERS' Drill-resisting Armour Plate.

They are lined throughout, that is, on all sides, top and bottom, and the door, with chambers containing MILNERS' Patent Moisture-generating and Non-conducting Fire-resisting Composition.

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MILNERS' "VEE-BAR" Construction is the most efficient and inexpensive form of reinforcement for Concrete Strong Rooms that has yet been devised. It is particularly suitable for large firms, and in all situations where there is danger from fire and explosion. The "Vee-Bar" Room can be embodied in the construction of the building, or can be erected as an inner lining to an existing room whose strength is not considered adequate. Strong Rooms of this description are usually built without foundations, straight from a prepared floor.

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Perspective view showing "Vee-Bar" reinforcement in position.

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But American stock markets business readers remain pessimistic.

There are many causes—the alarm about Europe, the soft coal miners' strike, the complicated political situation. These are responsible for this timidity. Until American business goes forward with confidence, commodity prices can scarcely be expected to rise, which means that our Empire and Far

Eastern customers have less money to spend.

Two Major Dangers Are Now Facing Us

THE new situation offers two new dangers. First is the possible loss of gold, which is streaming out of the country. This might weaken sterling,

if it persists. The second is a possible rise in the adverse trade balance due to our large purchases of raw materials for armaments.

Fortunately both of these evils are controllable. The Government can stop the outflow of gold at any moment. Similarly, it can make exchange agreements with our largest foreign customers. That would give us the right to a bigger proportion of their orders.

A brand new problem may be presented to us by the Ministry of Supply. For the present, however, this Ministry is to buy only for the army. Presumably therefore, priority orders will apply only to army demands. This is a much narrower and milder form of control than business had to face during the last war. Experience then showed that the control of materials and men came into force gradually and could not be met by a little foresight. We need expect no sudden shocks to industry, no putting of private production out of gear.

The executive is called upon to plan ahead for labour and material supplies; to arrange substitutes for both men and materials where necessary; to make use of machinery to the utmost.

Conscription May Take 200,000 Men

WHAT of conscription now introduced? Even in this case only some 200,000 young men between 20 and 21 are to be affected. They would not all be taken from their work at the same instant but would be gradually withdrawn over a period of months. With a pool of 1,800,000 unemployed people, the labour problem should not be acute this year.

On the other hand Mr. Keynes is certainly right in prophesying an immense reduction in unemployment.

The expenditure of an additional 400 million pounds will certainly give employment to a further 750,000 people.

Boom Conditions Are Almost Here

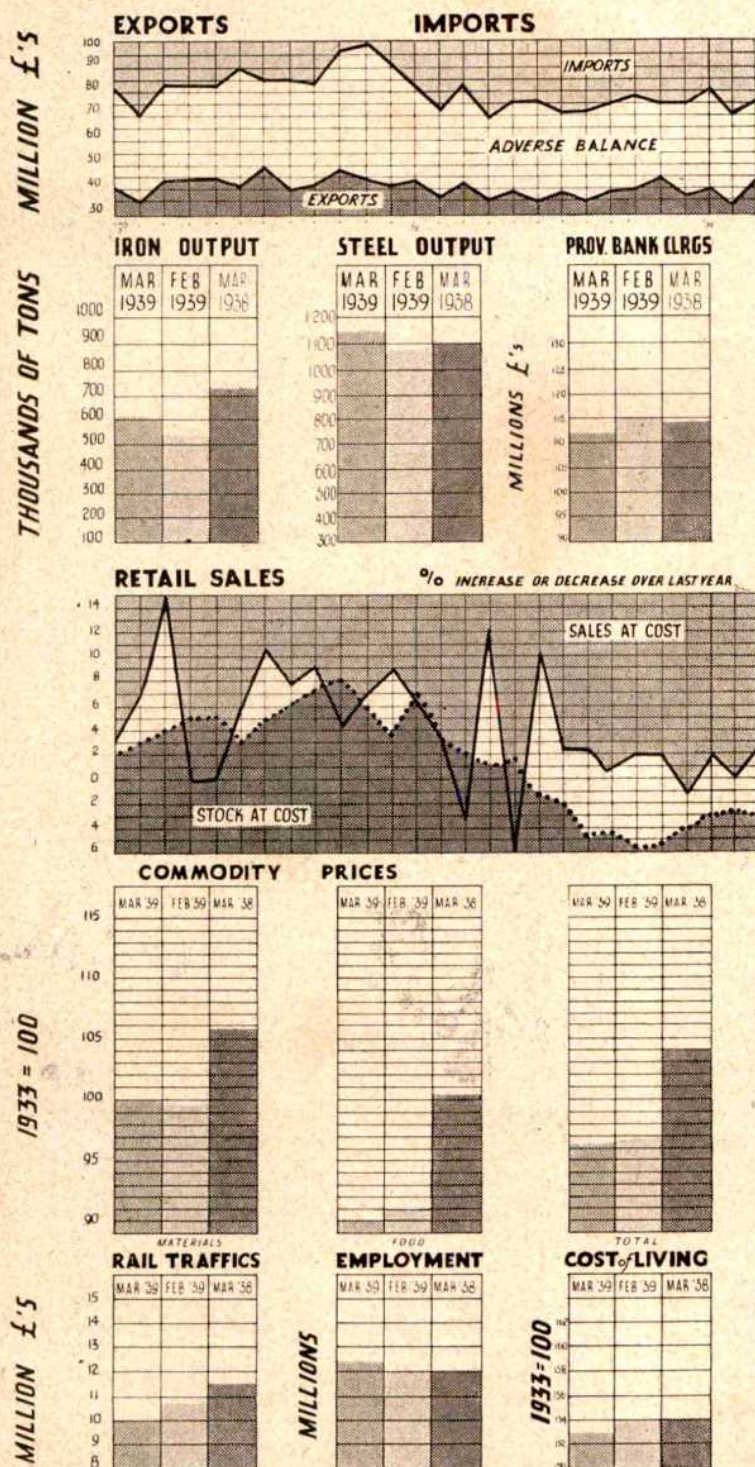
CLEARLY, as we have soundly predicted, we stand at the beginning of an enormous expansion in business. The moment has come again to spend for a developing market, particularly at the cheaper end. The wise executive will plan ahead, to be ready for boom conditions. Supplies should be put on tap far ahead to counter the inevitable shortages and price rises. At the same time far-sighted plans must be laid for the retention of all possible workers and the training of new ones, particularly women. Any possible addition to plant should be made at once, whilst equipment is available at reasonable prices.

The case of the purely luxury industries is another matter. Here the best policy may be to plan cheaper lines for a broader market or to switch entirely to more essential lines.

Whatever type of business it is, the first duty of every executive is to discourage pessimistic talk and to concentrate energies on developing business.

GUIDING FACTORS IN THE TREND—

All comparisons are with similar month in last and previous month in this year



FOR MAXIMUM EFFICIENCY WITH MECHANISED ACCOUNTS

INSTALL:—

COPE-CHAT VERTICAL VISIBLE

which automatically gives positive control of Credit and Overdues.

COPE-CHAT MAYBEE TRAYS

which, being light, portable and adjustable, provide easy handling and speedy posting.

COPE-CHAT FIRE FILES

for adequate Fire Protection 24 hours per day, actually at the machine.

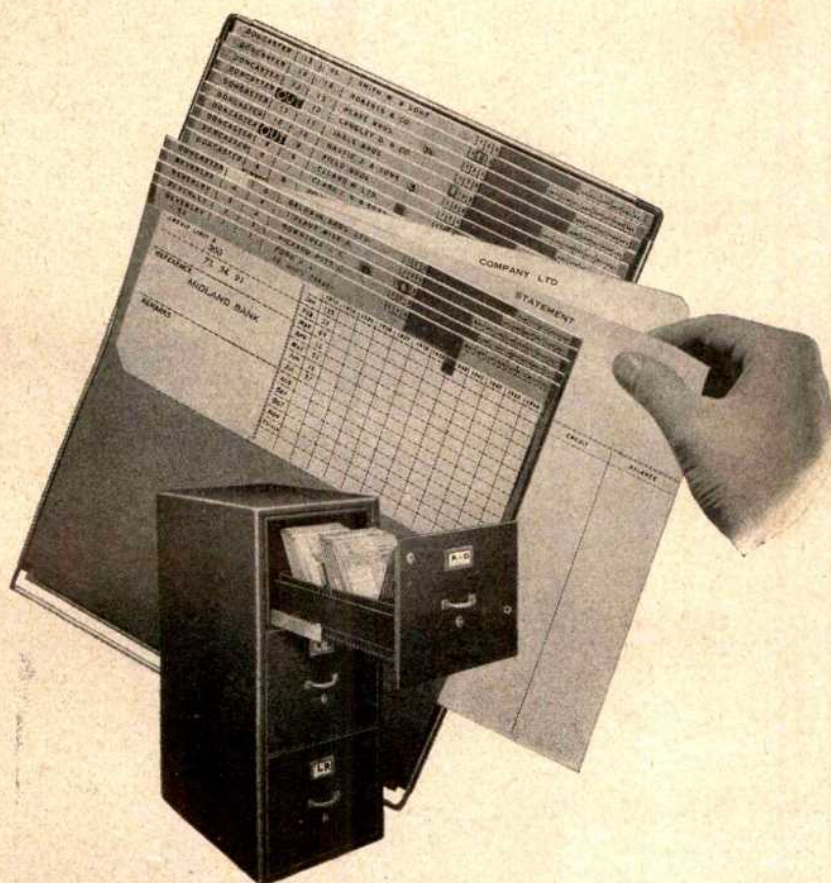


Illustration shows how each ledger card and statement is separately housed behind a Visible control pocket on a Vertical Visible Panel. Panels are housed in portable Maybee Trays, which in turn are safely placed in Fire Files situated at or near the machine.

Cope-Chat specialise in Systems and Equipment for all phases of mechanisation. Booklet B.17 is yours for the asking. Post free by return without obligation. If you are interested why not write us?

Perhaps you have less than the maximum economic efficiency in the control of your Purchasing, Stores, Production, Costing or Sales Departments? Our half-a-century of experience is available without cost if you will permit us to co-operate.

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SPECIALISTS IN MACHINE ACCOUNTING EQUIPMENT

BRANCHES THROUGHOUT THE PROVINCES

Over £64,000 Sales of a New Product Through this MARKETING SCHEME

WHEN the British Doughnut Co., Ltd., started, 18 months ago, their object was two-fold: (1) to sell doughnut-making machines to bakers and confectioners; (2) to market a special doughnut mix.

They have carried out their plans with success. To date machinery sales total £64,000; over 300 dealer accounts have been opened; sales of the mix have risen 25 per cent during the past six months.

A superficial examination of the marketing problems would suggest that the doughnut-making machines could be sold easily to the dealers. The four outstanding points about the machines, for instance, are these: they (1) are automatic and need no skilled operators; (2) consume heat only 36 minutes in every hour of baking, yet produce 10 per cent more doughnuts from the same amount of mix as compared with ordinary machines; (3) have an air-exhausting system which eliminates all objectionable smells; (4) bake ringed doughnuts, one side at the time in separate compartments, which ensures a fully expanded product with the minimum of fat.

Had to Overcome Two Big Adverse Factors

Such advantages as these must make a big appeal to the retailer, but there were other important factors to consider. The doughnut made by the machines from the company's special mix was a new product in this country. There was no guarantee that English housewives would "take to" *Downy-flakes*. Dealers needed convincing proof that the product would sell before buying the fairly costly equipment needed. This was a big adverse factor, because retailers already had equipment for producing the familiar type of doughnut.

Another difficulty was to overcome the natural hostility of bakers and confectioners in "teaching them their job." For dealers had to be instructed in the use of the new machines and in methods to increase sales of doughnuts. (The sales of the special mix depended on dealers' success in "putting over" the new product with their customers.)

To overcome these difficulties and to build business quickly yet on a sound basis, the company planned and organized their efforts on three lines: (1) limited market research through a sales campaign in a typical middle-class district; (2) selection and training of a specialized sales staff; (3) merchandising campaign to co-operate with retailers before and after sale of machines.

The market research was carried out by three salesmen, selected by Mr. Levitt. They were given a short intensive training in the factory. By seeing

By K. G. HEMINGWAY

From an interview with

S. J. LEVITT

Managing Director,

British Doughnut Co., Ltd.

the doughnut-making machines in action and by learning of the quality of the mix, the men were convinced of the product's worth and "marketability." Then they were equipped with tricycles and sent into the specially selected district—Queensbury, Middlesex—to build up a "doughnut round." (Queensbury was chosen because (a) the inhabitants' incomes range from £4 to £10 per week and (b) because through recent growth and proximity to London it con-

sure." They were trained to make the approach friendly, more in line with the idea of recommending the housewife to try the product rather than selling it to her. This policy succeeded, for in the 90-day period of experiment each man averaged daily sales of 60 dozen doughnuts from Monday to Thursday and 120 dozen on Fridays and Saturdays.

These results showed that the new doughnuts could be sold here in large quantities.

The facts and figures about sales and experiences of the three salesmen were, of course, good material for the specialized sales staff in approaching retailers. The information was also used later by the merchandising staff in their work of helping dealers to increase doughnut sales.



Tricycle roundsmen (left) were used for market research, a key to the whole sales campaign (see text)

Sales are boosted for dealers by merchandising staff. Loud-speaker van shown here is one part of scheme



October National Doughnut Month. Publishing Vix., 1932

tains people from all areas in Britain.)

The campaign was planned carefully. Samples were not stuffed hastily through letter-boxes. Instead, the men personally handed housewives a carefully worded letter of introduction, explaining that the new doughnuts were made from a nutritive mix in special machines. They talked about the product and left a sample packet.

In nine cases out of ten the product was liked. In the tenth the salesman made another special call. If the housewife was non-committal he called again and, if necessary, a fourth time. In 90 per cent of these cases the woman and her family acquired a taste for the doughnuts.

An important point is that the men did not make the canvas "high pres-

While the market "probe" was being carried out, the company was selecting and training specialized sales force and a merchandising staff.

A point of special interest here is Mr. Levitt's method of staff selection. He does not, for instance, employ a man on the strength of one interview. He thinks that more than a half-hour conversation is needed to sum up a man's character. Mr. Levitt, therefore, sees each man at least three times before he confirms employment. Another point is that he does not rely on past achievements.

"Sometimes mediocrity shown by past records conceals a selling ability that can be developed," Mr. Levitt explained. "I have engaged several men who were failures at selling other



What will your new factory cost

Our COMPLETE SERVICE is designed to save you time and money on the construction of your new factory. It is a service that embraces everything from site selection to building. *It gives you an exact all-in price in advance.* Instead of complicated negotiations with a dozen different specialists, you deal with one man representing one organisation. One organisation that is responsible to you for the entire project. Every detail is planned in advance and controlled from under one roof. The cost is kept lower than has ever been possible by previous methods. We shall be glad to submit suggestions and estimates without obligation, for any schemes you have in mind.



Commercial Structures Ltd

CONTRACTORS and ENGINEERS STAFFA ROAD LEA BRIDGE ROAD LEYTON E10 Leytonstone 3678

products. Some of these men are now among my star salesmen."

With this open-mindedness Mr. Levitt selected his new sales staff. They were then put through a three-months' training course in the factory, during which they learned every detail, technical and otherwise, about the machines they were to sell. They were, of course, fully instructed in the points which showed retailers how the machines would build up record business.

As the result of this training, when the salesmen went out to their territories they did not talk parrot-fashion, like a page of the company's brochure.

When a machine was sold the merchandising staff took control of the

at this point. Effort was continued by selling the doughnuts to the public on behalf of the dealer. This was done to raise sales of the mix to the retailer. Counter-pamphlets, for example, were used to emphasize the quality of Downyflakes doughnuts. Different ways of serving the doughnuts and the meals and occasions at which they could be eaten were explained. Retailers were instructed in methods of "dressing up" doughnuts—with icing, sugar, chocolate, etc. Thus every effort was made to get the retailer's active co-operation and, at the same time, the public was "educated" to a new way of thinking about doughnuts.

As part of this scheme the merchan-

prints of snapshot pictures add interest to his weekly bulletins.

One snapshot is used per week. Its success lies in the fact that it is not posed or planned in advance—the snap is truly natural.

For instance, one of the office men was in a territory at the time the salesman on the job was carrying on in spite of blizzards. The office man snapped him lugging samples into a store almost snowed up. The picture with a caption which praised the man for carrying on in spite of the unusually bad weather was interesting.

Children, dogs, hobbies, homes, gardens, and so on make up snapshots used in the bulletins. The men have co-operated without any prodding from the sales desk to send in off-the-job snaps.

The pictures and captions form a front page of each bulletin. The idea has established itself as a good way to build reader interest in the material that is too often as dry as dust.

Displays of posters, stickers and other materials are used to help the new dealer build up sales quickly. On opening day retailers are given a quantity of the special mix to bake free samples. In big stores a film star is engaged to give away samples (see text)



shopkeeper. This staff was selected and trained with the specialist salesmen. In addition to being taught technical matters the merchandising staff were trained in after-sales service. Their main work was to (a) make retailers active in use of the machine, (b) make the public conscious of the new doughnuts.

After instructing the retailer on how to work the machine, they persuaded him to advertise the opening day with a "splash" announcement in the local newspaper. This policy, incidentally, was valuable to the company as well as to the dealer. It advertised the machines and doughnuts among retailers who might make trade inquiries.

Each new dealer account was supplied with several thousand letters to distribute to personal customers via roundsmen. Among other details, the letters explained: (a) how the machines made better doughnuts; (b) the quality of the mix; (c) the food value of the new doughnuts, a pound of which contains 2,000 calories compared with the 875 calories in a pound of beef, 1,265 calories in a pound of bread, 765 calories in a pound of eggs, and so on. Each letter also carried the Good Housekeeping Institute seal of approval.

For the opening day a free supply of mix for samples was forwarded. In the case of large stores, a film star was engaged to hand out samples.

By these means the merchandising staff gave each retailer a "flying start." But merchandising work did not stop

dising staff used a loudspeaker van and gave demonstrations at points selected by each retailer. Samples were handed to housewives and questions answered. Customers were also told of the varieties of doughnuts and different ways of eating them.

Where possible, the company got retailers to start a tricycle round. The success of this method in the Queensberry "probe" was held up as an example of what could be done by enterprise of this kind.

The success of the company's plan of attack on this market has been proved by sales figures. In the first 12 months, for instance, over 200 machines were sold to dealers.

A point to note is that the company has done little advertising. At the time the specialist salesmen started to call on dealers, of course, space was taken in trade papers. But no national advertising has been used. And it is not anticipated that any will be used until about 600 dealers are equipped with the firm's machines. That, it is estimated, will be in 1941.

This Gets Salesmen's Interest in Bulletins

EVERY executive is alert to ways that improve the reader interest of a house organ. The sales director of a Midlands firm has found that actual

Do Your Goods Suffer From These 'Fallacies'?

THERE are taboos and silly beliefs about packs and packaging as about most other things. Why, for instance, do some firms cling to the be-medalled, "be-photoed" and befuddled packages designed anything from 30 to 75 years ago? Often it has never occurred to the directors that the packs are hopelessly outclassed to-day. Frequently when this fact is pointed out, the firm still will not make the change because "The public would not recognize our product"—or for some similar reason.

Packs should be checked, revised and, when necessary, completely re-designed. The so-called obstacles to such changes are fallacies. In the following list Mr. R. Lonsdale Hands, Managing Director of The Design Unit, Ltd., sums up the eight chief packaging fallacies. That:

1. You cannot alter the name block on a package once it has been established.
2. The public does not know the difference between good packaging and bad, and does not care.
3. A view of the factory and general display of medals, exhibition honours, etc., has a strong influence on the public.
4. Some of the best packaged lines have been commercial flops because they are the best packaged lines.
5. The simplest design is the easiest to do and, therefore, the least effective.
6. The use of an unusual colour influences the public against goods usually associated with another colour.
7. If you shift the name a little, it will not make any difference.
8. Careful attention to packaging is all right for cosmetics, but in the hardware, food and textiles, where the margin for packaging is small, it warrants little attention.

DON'T WAIT FOR YOUR TYPIST— VOICE-WRITE YOUR IDEAS

Ideas, plans, decisions are rarely made when your secretary is at your side. Consequently there is an effort of memory, delay, and possibly distraction before you can "get them off your mind"—unless you employ Ediphone Voice-Writing. An Ediphone is always at your desk, always ready to record your ideas. It saves *you*—frees your energy and time for other business. It saves your *secretary* needless routine, and promotes a smoother running organisation.

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For recording telephone conversations, Board-room conferences, minutes of public meetings, speeches, etc., use the TELEDIPHONE

Any Use For These Nine Up-to-date Container Packing Ideas?

MANY firms could profitably investigate the problem of containers. Too often old methods of packing—costly in time, materials, breakages and transport charges—are allowed to go on year after year. Little effort is made to find out what is new

in packaging, yet big economies are possible by using up-to-date packaging methods.

Shown on this page are nine types of modern containers which are cutting packing costs. In looking at these examples you should keep in mind that

they merely illustrate some fairly recent developments. Although a container suitable for your products may not be shown, nonetheless there is likely to be one available. If not, container manufacturers will design a special container for your products.



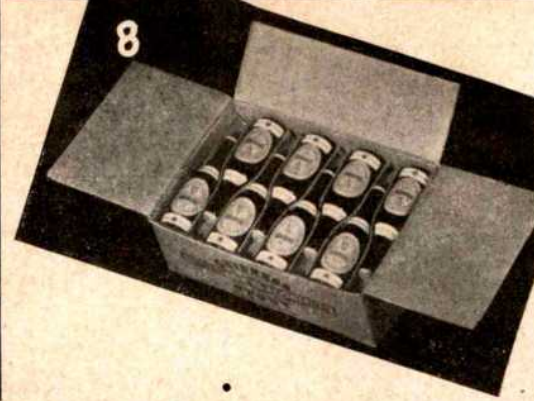
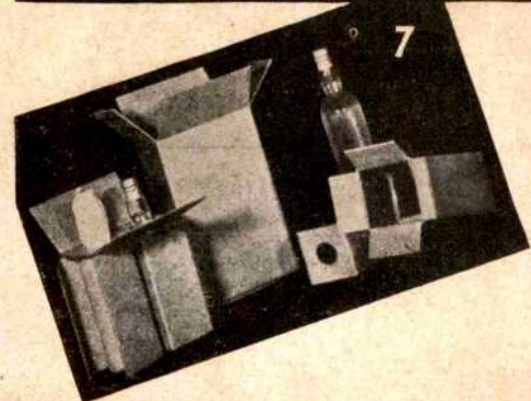
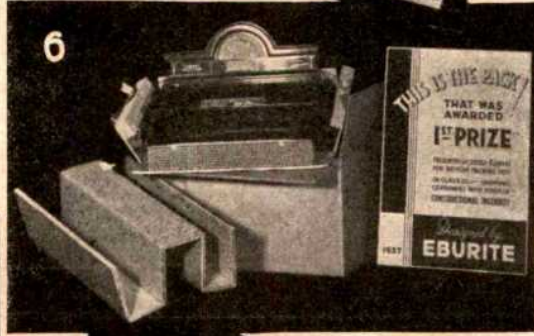
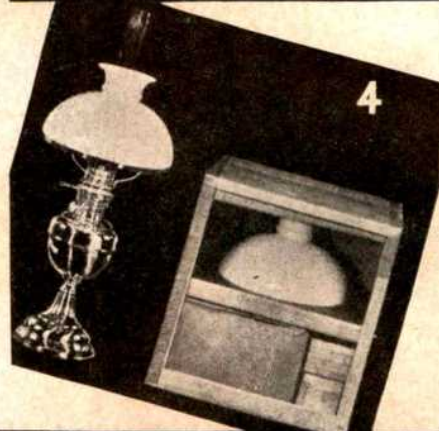
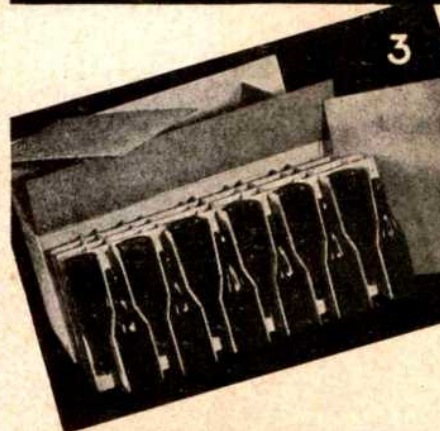
Two new types of open-top tray packages are seen in illustrations 1 and 2. Being open, they get special handling by transport companies. Exposed contents also safeguard against pilferage, as goods are easily checked on every stage of a journey. No porter or carrier at any stage will accept goods if incomplete. This type container has almost eliminated pilferage in transit.

Illustration 3 shows an export container to hold 48 one-pint bottles. They are vested with new patent division, which gives saving of 15 per cent in space. Where carriage is on cubic capacity, not weight, this has special advantage. There is, too, saving up to 10 per cent cost. (Illustration 8 also shows example of this type of pack.)

Big advances have been made in packing fragile, awkward products. For instance, illustrations 4, 5 and 7 show simplified modern containers which travel at railway company's risk. In each wood-wool and shavings are eliminated—saving cost of material and packing time. Containers are kept in service from time the goods are manufactured until they reach consumer. Loss through breakages in transit and by retailers is greatly reduced.

Illustration 6 is outstanding example of constructional ingenuity, typical of "special" containers designed to meet

a manufacturer's specific needs. Container (illustration 9) is made of corrugated fibreboard; is rigid when set up, cheap form of combination display-container. (Illustrations, courtesy of Eburite Corrugated Containers, Ltd.)



20. CENTURY MFG. CO.

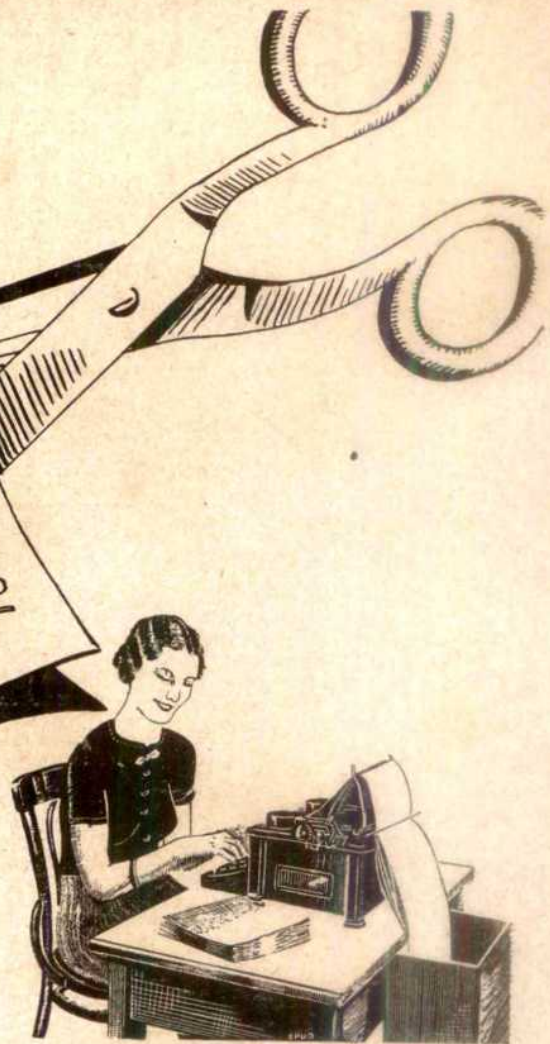
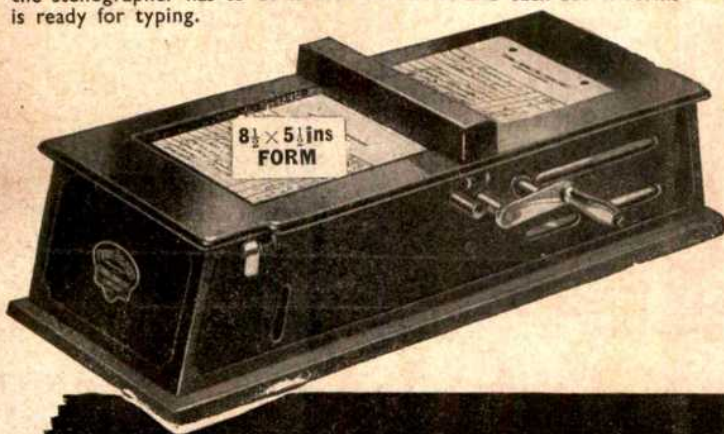
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AUTOMATICALLY CLIPS OFF
ONE THIRD
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The PRIMUS attachment, as supplied by us, fits any typewriter and facilitates the smooth flow of continuous forms. It allows the machine at a moment's notice to be used for either billing or ordinary correspondence work.

PRIMUS

The PRIMUS Autographic Register is designed to simplify the work of writing documents by hand. It is so constructed as to allow a number of duplicates to be made at one writing and at the same time automatically retains a check-duplicate under lock and key. It is used on tasks such as :

Job Progress	Warehouse Notes
Consignment Notes	Repair Orders
Requisitions	Cash Sales
etc.	etc.

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A.R.P. is Necessary For Your Vital Business Records

NEXT to air raid precautions for personnel, measures to ensure continuity of business in the event of war are important. This is particularly true of essential records. A review of the methods and means available for their duplication and preservation, in face of the present unstable international situation, is, therefore, timely.

The review is of interest to those who anticipate being within the focus of hostilities. It is also interesting from the point of view of normal fire risk. Executives do not always realize how difficult it may be to get a business on its feet again and in full working order after the destruction by fire of all the business records.

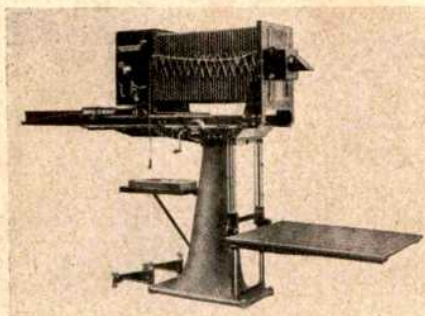
Two Main Factors In A Survey

The preliminary survey should have two distinct though inter-related objectives: (1) the determination of policy in the event of hostilities, and (2) the effect of such policy in regard to the protection of records.

The policy to be adopted in the event of hostilities will depend on the degree of exposure to risk and will cover the following alternative measures:

- (1) The removal of records, and staff, of course, to a safe location;
- (2) The deposit of records in a safe place either within or outside an area of risk, and
- (3) The duplication of records.

Since the best programme for any individual firm depends on so many



The Photostat method enables documents and books of big sizes to be dealt with. Copies of any size desired can be reproduced.

varying factors—such as present location, type of business, size of firm, availability elsewhere of branch offices, factories, or premises belonging to associated concerns—only general considerations bearing on question of policy can be indicated.

Removal of records and staff to a different location involves transport. It is not possible to forecast the effect an outbreak of hostilities is likely to

By C. H. COSTELLO,
A.C.I.S., A.C.W.A.



With documents 3 in. long, the Recordak can make from 4,500 to 6,000 copies an hour; 100 ft. film will carry 2,300 copies of documents 10 in. sq., more, of course, if originals are smaller

have on transport facilities. At the outset, no doubt, railway transport would be devoted primarily to essential services. Petrol supplies would be strictly controlled, so that road transport might not be readily available. Furthermore, plans for evacuation of population would assume priority over more material considerations.

Again, the removal of the staff involves arrangements for dependants as well as employees themselves. And a further complication arises, except in the case of reserved occupations, from the depletion of staff for military service.

The deposit of records in a safe place within an area of risk is difficult to carry out effectively in practice. Safes and strong rooms ordinarily available are not proof against a direct hit by a large high-explosive bomb. True, the chance of a direct hit is small, but it cannot be ruled out.

There are also the difficulties that: (a) surprise attack may upset arrangements for securing items in daily use, (b) reference to deposited items is not easy.

It is clear, therefore, that duplicating of essential records provides the only means of maintaining unimpaired full working facilities.

Assuming that this policy has been determined, you must now decide what records require duplication.

This involves consultation with re-

sponsible departmental heads. The object is to list all records, to determine their order of importance and decide which are of an essential character.

It is then necessary to ask this question in relation to each category of record maintained: "Supposing your department records were completely destroyed, how could they be reconstructed?" This will bring to light first records, such as daily sales summaries. Being derived from sources within the organization, these could readily be reconstructed, given survival of the original sources. Secondly, there are records, such as certain ledger accounts. As these have been built up over a long period, they would be difficult to reconstruct. Thirdly, there are records, such as plans, research formulæ and minute books. By their nature these could not be reconstructed without the greatest difficulty, if at all.

Leaves Only Records Essential To Duplicate

After this analysis, the next job is to segregate records infrequently consulted which can be deposited elsewhere for safety. This leaves only those records it is essential to duplicate. (But it may be found in small organizations that complete duplication provides the easiest solution.)

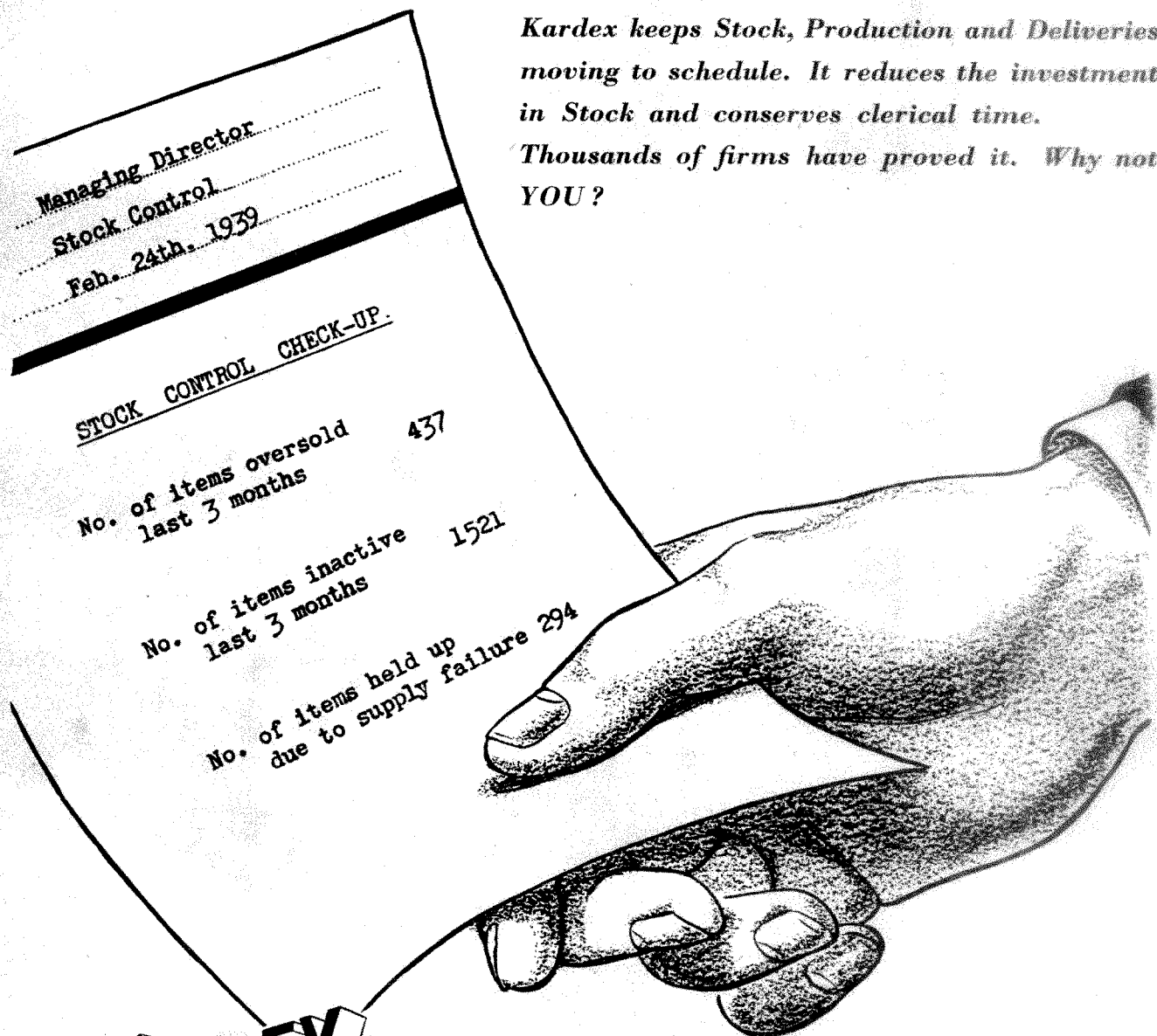
Duplicated records may be provided in three ways: (1) by ear-marking for

Can your staff place these figures on your desk **TO-DAY?**

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Kardex keeps Stock, Production and Deliveries moving to schedule. It reduces the investment in Stock and conserves clerical time.

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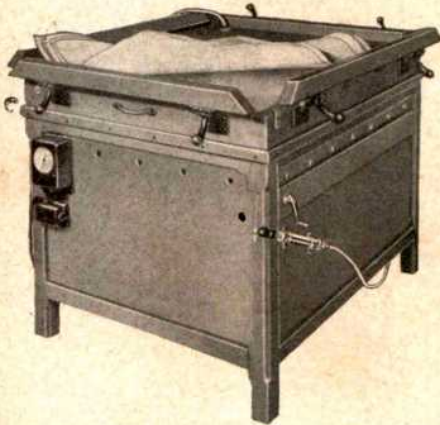
Write to-day for Stock Control Folder No. 131
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special protection copies normally used for some purpose and later discarded; (2) by providing additional copies as part of routine work; (3) by photographic or other means of reproduction.

The first process is well illustrated in the case of a firm using a mechanical accounting system and producing a pur-



Copying can be done in any office with the Ruthurstat Electro Copyist. Facsimile reproduction of letters, reports, plans, charts, etc., can be made easily and quickly without the use of a dark room. Two models of the machine are shown here

chases or sales journal sheet for daily control. Usually this journal sheet would not provide sufficient data to enable the posting therefrom of ledger cards. There is, however, little difficulty in arranging to insert the required customer reference. In case of necessity the journal sheet can then be used as a posting medium for individual ledger cards. By separate storage of the journal sheets an independent means of reconstructing ledgers is provided at little cost.

The second way to provide additional copies can easily be carried out where typed copies of items, such as minutes, are being prepared, in the case of all important correspondence and wherever machine accounting produces invoices, cash receipt slips, etc.

In reproduction of existing records, paramount considerations are accuracy, cheapness and portability. Undoubtedly photographic methods best fulfil these requirements. Accuracy is, of course, unquestionable. The various processes are not expensive, especially where miniature film stock is the recording medium. Portability at least equal to that of the original is secured.

Four types of apparatus on the market represent the different photographic methods of reproduction.

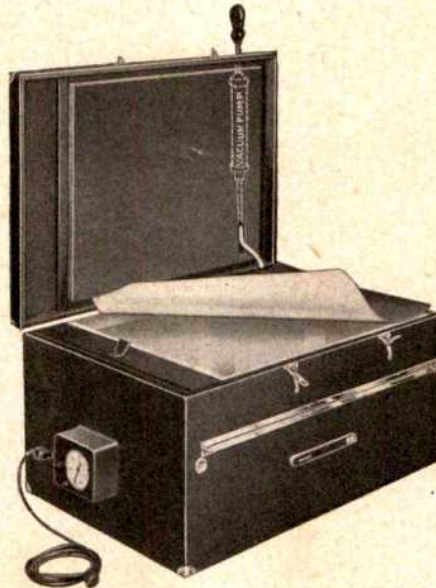
The first of these operates on the "direct-contact" principle. No lens is used in the production of the photocopies, therefore copies are the same size as the original.

The machine can be used in any office under normal lighting conditions, and no dark room is required for developing. Various models provide for different maximum sizes in documents up to about 24 in. by 20 in.

The apparatus is very simple. It consists of a box, inside which is a sheet

of glass. Upon this, with a piece of sensitized paper, is placed the original to be copied. The length of exposure is regulated by a time switch which at the right moment cuts off the lighting. The time taken for the whole operation is less than two minutes, and the copies are, of course, completely facsimile as regards signatures, stamps, erasures, watermarks, corrections, and marginal notes.

It is also practicable to copy separately each side of a document containing printed matter on both sides. This type of equipment is particularly valuable for engineering firms and drawing offices for copying designs, schedules and specifications.



The second type of apparatus embodies a camera using miniature film. It is adapted to reproduce either bound books or loose sheets. A reproduction speed of some 500/600 single or double pages an hour, according to size, is attainable. After exposure, the film is handed over for development by the makers. They provide an overnight service.

The finished spool of film occupies, of course, a very small space, estimated at only 1 per cent of that required for paper copies of the original records. Recorded matter can be referred to at any time by running the film through a special projector. Should the necessity arise, positive full-size copies of each page can be produced from the spool by the makers.

The third type differs from that just described—it is designed to deal at high speed with loose sheets or cards, such as cheques, invoices and record cards. The speed is determined (a) by the skill of the operator in feeding the machine and (b) by the size of the documents. With a document 3 inches long, speeds as high as 4,500 to 6,000 copies an hour can be attained. One hundred feet of film will carry copies of 2,300 documents 10 inches square and even more, of course, if the originals are smaller.

Similar arrangements for processing of the exposed film obtain, and projec-

tion is by the same type of apparatus. With suitable indexing and filing, individual documents can be traced and projected very quickly. Full-size, easily read facsimile of the original document is shown. Two models are available and will take sizes up to 8½ in. and 10½ in. in width respectively. Thicknesses are up to that of a stout postcard. The length of each document is immaterial. Either machine may be hired upon a rental basis.

The fourth type is, of course, the well-known photostat process employing a camera with built-in paper magazine and developing tanks attached. This will deal with documents or books of considerable sizes. Although slower in operation than the first of the machines described, it has the merit that paper negative or positive copies of any desired size may be produced. The cost of each copy varies from about 9d. to 2s.

Apart from methods of making duplicate records, it is desirable to draft a plan of operation. Then the staff moving to a place of safety will know also what to do to safeguard documents at the time of an air raid warning.

‘Machine Account’ to Check Efficiency

OFFICES would probably be better equipped if office managers kept what might be termed a machine account. This account might take on the following form:

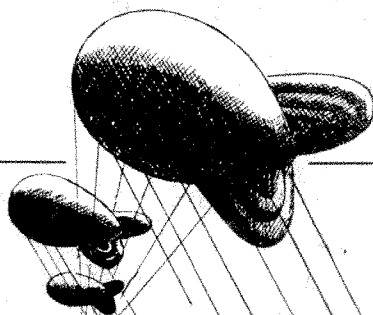
A record would be kept of the costs of all manual and mental operations which could be performed mechanically. Such a record would show also the number of errors made under the present procedure and the expense of correcting them.

Opposite this record would be shown the estimated cost of doing the work by machine. In computing machine expenses, consideration would be given to such factors as depreciation and obsolescence, floor space cost, interest on investment, taxes, power and extra lighting required, etc.

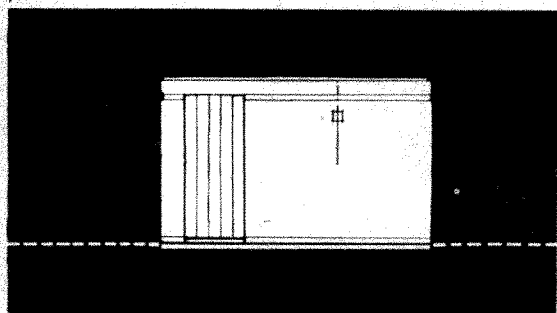
Costs would be entered on the machine account item by item, and fixed costs and operating costs would be separated. This comparative record would indicate clearly whether or not the purchase of equipment was profitable.

If the total cost of performing an operation by machine is less than the cost of doing it by hand, an office cannot afford not to buy the machine. Where accuracy and speed are required, the purchase of the equipment may prove profitable even though direct savings are not apparent.

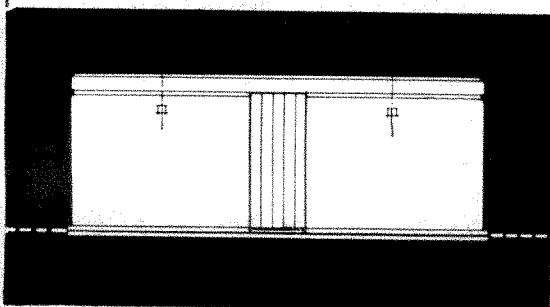
It should also be a duty of the office manager to maintain an up-to-date file of office equipment catalogues and of pertinent data on office machines.



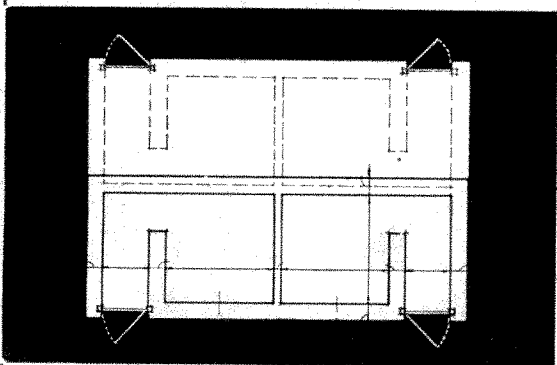
Don't wait till the **balloons** go up!



Pill-box single unit shelter for 6-7 persons



Double unit shelter, for two families



Ground plan of shelter for four families

THIS "PILL-BOX" DUAL PURPOSE AIR-RAID SHELTER HAS WALLS OF 12 INCH REINFORCED CONCRETE AND A 9 INCH CONCRETE ROOF

It will give protection against blast, splinters and falling debris.

THE ROOF IS EVEN STRONG ENOUGH TO RESIST A SMALL INCENDIARY BOMB.

In peace time the shelters can be used as sheds, stores, etc.

COST IS APPROXIMATELY £35-£40. MULTIPLE SHELTERS CAN ALSO BE BUILT TO ACCOMMODATE 24/28 PEOPLE.

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COUPON To Cement and Concrete Association, Dept. B.U.3, 52 Grosvenor Gardens, London, S.W.1.

Please send me your leaflets describing the "Pill-Box" Dual Purpose and other types of concrete shelters.

NAME

ADDRESS

Your Dealers Could BUILD SALES Through This Accounting System

A SOUND way for manufacturers to increase profits is to help retailers to raise sales per shop assistant. If, for instance, the average sale is increased only a few pence a worthwhile rise in the net profit takes place. That is good for dealer and manufacturer.

Let us look at the problem from your retailer's viewpoint. He gets extra profit from (a) more goods sold and (b) because operating expenses do not go up in proportion to the increase in sales. If you can help your dealer in these two ways you are, ultimately, helping yourself.

Payroll is usually the biggest expense in retailing. That is the chief item in the cost of selling, therefore to sell more per hour per shop assistant is sound sense.

A first incentive for increasing sales is to make it possible for assistants to earn more by selling more. A start can be made by adjusting assistants' earnings to be in line with this policy. But a first and fundamental need is to have a complete record of what each salesman does every day.

Six Facts Your Retailer Must Determine

Investigation sometimes shows that the best-paid assistants do the least towards profitable operation. No business man can determine the value of his salesmen unless he is in possession of the following six facts:

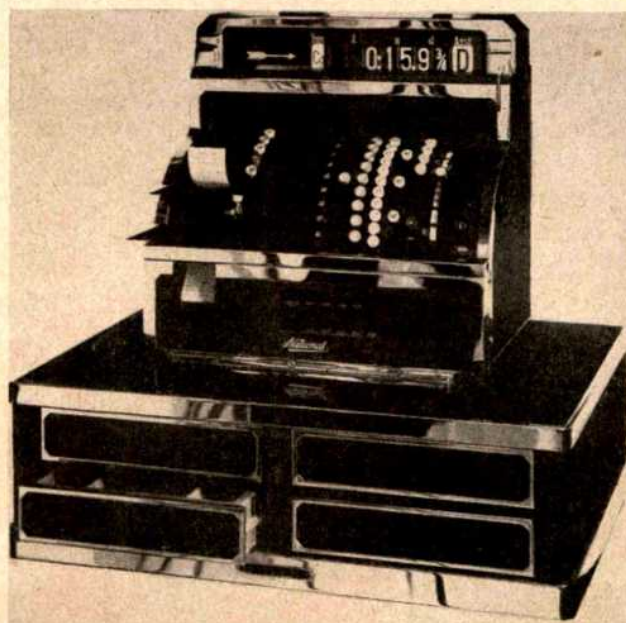
1. Total amount of each man's sales.
2. Number of customers each serves.
3. Average value of sale of each assistant.
4. Cost per sale of each assistant.
5. Total amount of sales—daily, weekly, monthly, yearly.
6. Total number of customers served during each period.

When a dealer knows the amount of his sales and the number of customers served during any period it is easy to determine the average sale. This is very important information because there is an average sale which marks the division point between loss and profit.

Likewise, when the amount of an assistant's sales and the number of customers served during a given period is known, the average amount of each man's sale can readily be determined. By dividing wages by the number of customers served, the dealer can find the average amount it costs him for each assistant to serve a customer.

Figures for the average sale and the cost per customer reveal, of course, which are the efficient and which the inefficient salesmen. They also show

Many retailers do not develop their business because they have no system of real control over vital sales factors. As explained in this article, here is a machine which enables a dealer to control his business—to his and the manufacturer's profit. By bringing this system to the notice of your dealers you are, therefore, helping yourself



which should sell more merchandise and which should wait on more customers.

All of this information can be automatically supplied if the dealer uses a modern cash register system.

Analysis of some dealers' businesses where the owner worked himself and employed two or three assistants, disclosed that in many cases the profit on the owner's personal sales was greater than that on the entire business. These retailers worked for their assistants. Had they been in possession of actual facts they would have made the necessary changes in staff to alter completely the net profits of their business.

Many dealers keep accurate records, make careful selection of staff, and develop a genuine spirit of teamwork. In many cases this has led to an increase in the average sale of 6d. per customer.

More Profits For You In These Sales

Let us assume that 360 customers per week are served by an assistant in the shop of one of your typical dealers. The figures are:

360 customers served per week per assistant.

6d. increase in average sale per customer.

£9 increased total sales per week.

20 per cent gross profit.

£1 16s. increased profit, 52 weeks.

(This gross profit is actually net profit.)

£93 12s. increased profit per year per assistant.

The retailer should never lose sight of the cost per sale for each assistant. If an assistant knows that a record is being kept of his average sale he may try to serve all customers he knows to be heavy buyers. This means neglect of small buyers, children and casual

customers. And the sales man may actually increase his average sale while having a lower aggregate of sales for the day or week.

Increasing the average sale alone is not enough. A properly devised and efficiently run system will reduce the cost per sale at the same time. Higher average sales and lower costs per customer are the two necessary bases for measuring salesman's worth. The means for determining these facts are readily available.

Increasing the average sale does not mean getting in more customers, desirable as that is, nor raising prices. It means having assistants intelligent enough to make customers buy more than intended.

Here are a few ways to increase the average sale:

Sell larger quantity.

Sell better quality.

Sell articles that are used together.

Feature group prices for similar articles.

Call attention to new goods.

When an article asked for is not in stock, sell something that will take its place.

Offer to get anything a customer asks for.

Display related goods close together.

Put near the cash registers and on wrapping counters goods most often sold by suggestion.

Remind customers of specials and bargains.

Teach assistants the value of increasing the average sale; promote friendly rivalry among them by offering commissions or prizes for the best records.

For example, let us examine one of these points. When a customer asks for a tin of white enamel the salesman ought to suggest a brush to go with it. This suggestion will be accepted nine times out of ten, which increases the average sale—more, it pleases the customer. • For, had the customer

(Continued on page 47)

Photography

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DEPARTMENT

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FOUNDRY

Certainly not the only fine creative photographers in London, Gee & Watson yet find their studio working full time *all* the time. We get the work because we really understand the meaning of photography for advertising. That is, we photograph always with a view to the ultimate reproduction for a definite purpose and screen. We know what the client wants and give it to him.

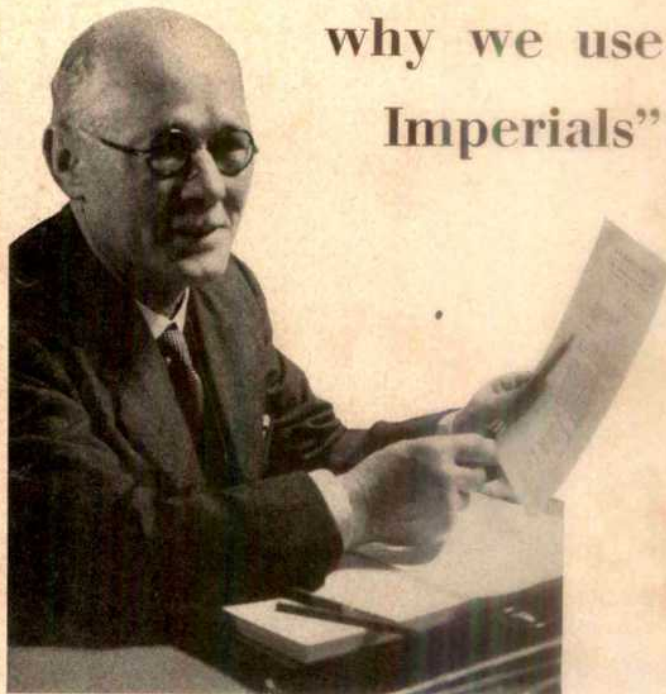
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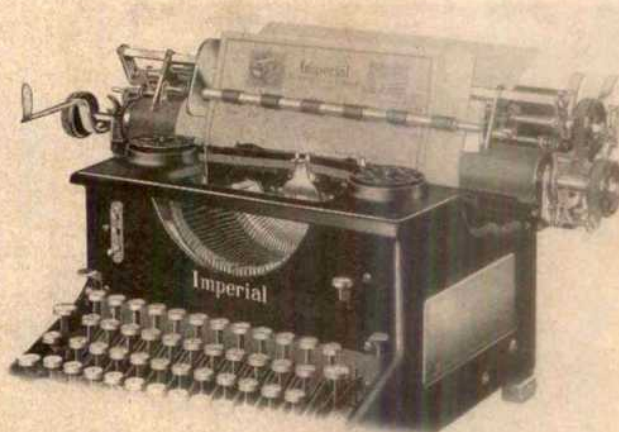
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"Here's another reason
why we use
Imperials"



"By fitting special attachments to our Imperial typewriters, we have speeded up a number of operations in our accounts department at a comparatively small cost."

Special Attachments for
Imperial
British-made typewriters



Write for interesting literature to
Imperial Typewriter Co. Ltd., Leicester
London Office : 85 Kingsway, W.C.2

"USE A TYPEWRITER MADE IN THE UNITED KINGDOM"

Cut Out Time, Cash and Labour Loss Caused By Staff Foot Troubles

PERSONNEL welfare is now recognized by management as a major responsibility. In practically every branch of health the employee of the modern firm is protected. Eyes, teeth and general health all come under the care of qualified practitioners.

Until quite recently, however, the feet were largely neglected, except in a purely general way. Yet the feet of employees in many industries are every bit as important as the hands or the eyes.

A new measure announcing the status of chiropodists will enable this neglect to be banished. The profession of chiropody has been recognized by the British Medical Association.

Under the new measure, members of

the Incorporated Society of Chiropodists and the British Association of Chiropodists are to be admitted to the official register of Medical Auxiliaries, which at present consists of apothecaries, masseuses, radiographers and dispensing opticians.

This decision will affect more than 1,200 chiropodists throughout the country whose training and ethics conform to the standards required by the Board. It will also go far towards removing the danger arising from the activities of so-called foot experts whose training is below the necessary standard.

It is considered likely, if plans mature, that future developments will include the appointment of chiropodists

to hospitals as well as the extension of foot welfare centres in factories and the industrial life of the nation generally.

It is significant to note that over 80 per cent of the people in Britain are estimated to suffer from foot troubles of some kind or other. This percentage is heaviest in business and industrial occupations where the employees have to stand during their work.

Executives responsible for the health of factory operatives are reminded that the *qualified* chiropodist of to-day is a highly skilled practitioner who has to undergo an intensive two-years' qualification course, comprising anatomy, physiology, surgery and medicine in relation to the feet. His services, therefore, in full co-operation with the medical adviser, are of inestimable benefit in any industrial welfare scheme.

PLANNING has Brought Industrial Expansion to Welwyn Estate

ONE of the major social-economic trends of this century is the development of areas *planned* for industry. The importance to society and to business of such industrial schemes can hardly be overstressed; this planning is evidence of constructive thought and progress. And as such it is of vital interest to all manufacturers, especially to those who are, or will shortly be, looking for a new location for their factory.

There are to-day a number of first-class industrial estates in this country.

estate development company have produced an interesting record of the progress of Welwyn. Lavishly illustrated, it shows not only progress of the estate but of the firms which have located there. The services and facilities—electricity, gas, water, steam, rail and road transport, skilled labour, planned design and layout of the residential and shopping areas as well as that of industrial sections—which have largely helped manufacturers in their development, are dealt with in the brochure.

These facts and figures, together with

New Ring Cutters Do Quicker Job

SHARPENING the knives on rollers and heavy roll-cutting machines has always taken considerable time. Either the shaft has to be removed to lift up the knives or they have to be sharpened as an overtime job.

A specialist firm in Western Germany has made a ring cutter which can be changed in a few minutes without having to lift out the shaft.

The ring cutter is made in two parts but operates without any gap and with great accuracy. The method of fixing the ring cutters to the shafts is instantaneous and does away with bolts altogether. The two knives are semi-circular and may be ground on a circular knife-grinding machine or else on an ordinary lathe.

The predominant advantages of this ring cutter are (a) saving of time in changing the knives and (b) the much longer life of the knives.

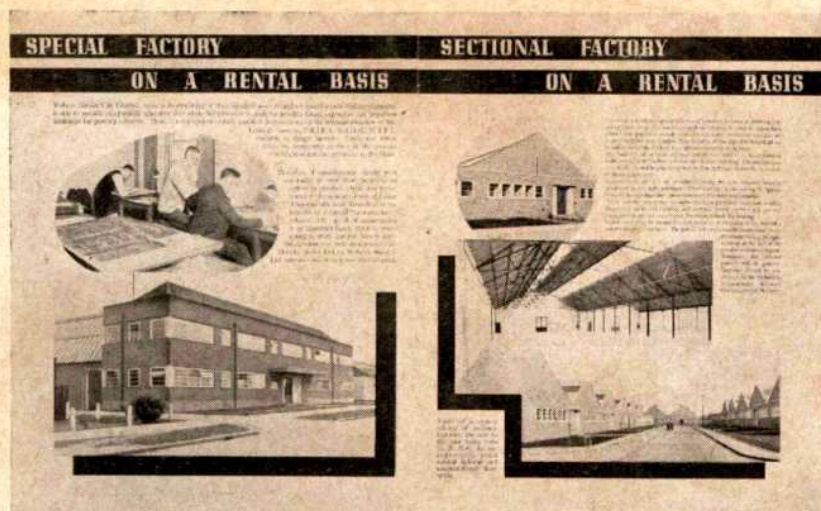
This New Wallplug Cuts Costs

A NEW plastic wallplug which does not require an accurate hole, therefore eliminating the need to carry different sizes of plugs, is now on the market. The product is known as "Philplug."

There is no need to wait until the material dries. The action of the screw entering the plugged hole hardens it. Full load can be taken immediately. The plug is entirely unaffected by fire or water. It is weather-proof under the most adverse conditions.

The manufacturers also make a complete range of masonry drills, jumpers, and other accessories. Full details are sent to interested executives.

Write to: Industrial Editor, BUSINESS, Whitefriars House, Tallis Street, London, E.C.4.



Shown here is one of the double-page spreads in the new brochure on Welwyn. Facts, figures and information needed by the manufacturer looking for a new factory site are given in full in the publication

Among them is Welwyn Garden City which, after 19 years of development, ranks as one of the models of an area planned for industry. In that time it has become the centre of nearly 70 new light industries and also of some "heavies."

In a brochure just published the

illustrations, make up a booklet which the head of every manufacturing firm should have. If any reader of BUSINESS would like a copy, it will be sent free on request. Write to: Industrial Editor, BUSINESS, Whitefriars House, Tallis Street, London, E.C.4.

The Grocer Looks up to MR. PLANE

A month ago we told you how MR. PLANE cleared a chemist's shelves. Now we tell you he is working in the same way for the grocer—the grocer whom you have appointed to sell your food-products. All over this country the grocer looks up to MR. PLANE to aid him in clearing his stock.

You can increase your dealers' turnover by enlisting the powerful aid of air publicity.



**Managing Directors and Sales Managers
should get to know Mr. PLANE, he can help
to solve your marketing problems**

Write for an introduction to Mr. PLANE

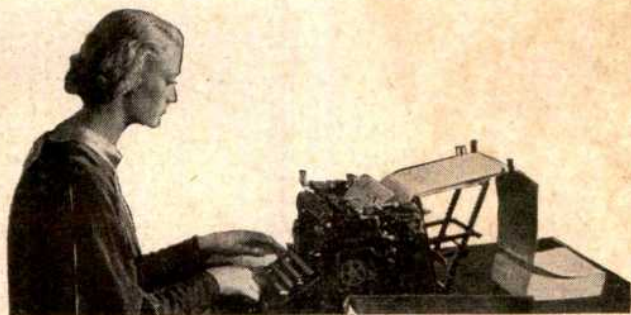
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One Machine does the work of Two

Continuous Form Billing in addition to regular typing

YOUR typewriter actually does the work of two machines when used with "Fanfold" Continuous Form Adapter, because the many time and money-saving methods of the Continuous Form Billing Machine are added to all the advantages of regular typing.

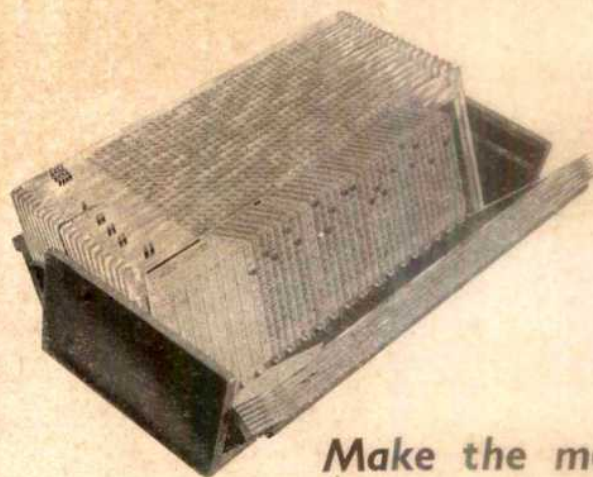
"Fanfold" Continuous Forms typed over our Attachment effect savings in Billing time and costs, ranging from 17% to 78%, without affecting the operation of the typewriter for regular correspondence and other purposes.

"Fanfold" Adapter places no strain whatever upon the typewriter carriage; because of the very simplicity of construction and operation there is nothing to get out of order.



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Telephone: GLADstone 5477 (3 lines)



Make the most of your book-keeping machine

Your modern book-keeping machine is capable of speeding up posting far beyond its present rate . . . why restrict its efficiency with old-fashioned indexing systems. "VISTEM" Visible Indexing cuts posting time considerably by locating the proper record card instantly, without thumbing and fumbling. Compact in size, unusually elastic, suitable either for mechanical posting or as a straight visible index, "VISTEM" revises all your preconceived ideas of the cost of visible systems.

"VISTEM" Visible Indexing

has already proved successful on the Continent, and is now being manufactured entirely in this country. Write or 'phone Abbey 3675 for details.

CARTER-PARRATT LTD

7 VICTORIA STREET, LONDON, S.W.1

Works: Wickford, Essex and Bath Northern Offices: 77, King Street, Manchester

Wages Problem: Why Notice of Dismissal Must Be Given

THE recent decision of the Court of Appeal about paying wages to an employee absent through illness has caused many firms a good deal of concern.

The facts of the case are these: the employee was engaged as a salesman at £3 ros. a week on a weekly notice; he became ill on December 4, 1937, and was absent from employment until March 26, 1938. When he returned, the employer gave him one week's notice, but he claimed arrears of wages for the 16 weeks from December 4, 1937, to March 26, 1938.

In the Sheffield County Court the judge's decision was against the salesman on the basis that when an employee did not attend work because of illness he was not entitled to wages in the absence of any express contract to that effect.

Wages Payable Until Contracted Notice is Given

The Court of Appeal judges found, however, that under a contract of service, irrespective of the question of length of notice provided by the contract, wages continued during sickness or incapacity from sickness to do the work contracted for until the contract was terminated by notice by the em-

ployer in accordance with its terms.

That statement makes the position quite clear. The fact that the salesman during his sickness drew benefit under the National Health Insurance scheme has no bearing on the case. A firm must give an employee notice according to the terms of contract. Until that notice is given the employee can, absent or not from business through illness, etc., claim wages.

These facts show clearly that in their own interests firms should engage every employee on specific terms relating to absence from work through sickness or any other reason. Many firms, of course, have already covered themselves in this manner. Others, since the Court of Appeal decision was made, have dismissed then re-engaged their staff on contracts which cover the point.

There are three methods in general use by firms to-day. Any of these can be used.

Here is the first: Each member of the staff is engaged on terms which set out specifically that in the case of sickness lasting more than a week, the company reserves the right to dismiss that person with one week's notice. That limits to two weeks the firm's liability to pay wages.

The practice, of course, varies with the individuals and the firms concerned. Where, for example, an employee is engaged on two weeks' or a month's notice, then it is customary to make similar allowances in the event of illness. An employee entitled to two weeks' notice would get two weeks' full pay and then his notice. That would limit the company's liability to pay to one month. Similarly, staff engaged on longer notice terms are treated on the same principle.

Scale Down Payments By This Agreement

The second is: A firm makes an agreement with each member of the staff on similar lines to that outlined but incorporating a scale of reductions in payment. For example, the employee on a week's notice when ill is paid in full for the first week, given half-pay for the next two weeks and no payment thereafter. He is told, however, that his job will be held open for a month. The proportions, therefore, are 1:2:4. These can be maintained for staff engaged on longer notice periods.

The third method is: When one of the staff becomes ill the company writes a sympathetic letter to the person and explains that, although it is necessary to give notice of dismissal, the job is held open for a stated period. Such a letter can be sent at the end of the first week or at the end of any length of time considered suitable by the firm.

Public Relations in Business

WITHIN recent years public relations has ceased to be a shibboleth and has reached out and affected nearly every phase of business and economic activity. It has manifested itself in a thousand and one diverse ways—in free cups of coffee served on railway dining cars; in dimpled and competent airline hostesses; in elimination of the "double standard" in executive and employee washrooms; in annual wage plans; in free cook books and cocktail recipes; and in "open house" at industrial plants.

In "Public Relations for Business," by Milton Wright (McGraw-Hill Publishing Co., 346 pages, 12s. 6d.), is a volume devoted to the special public relations problems of business. And business will like this book because Mr. Wright strokes his pictures quickly and gets to the heart of his subject with a minimum of qualifying considerations. The main impression he leaves is that there is no hocus-pocus in public relations, that the public merely takes your measure and decides whether or not you are worth your salt.

Mr. Wright has stripped a good deal of the glamour from public relations and made it the sincere pedestrian effort that it is. However, one cannot read the book without a sense of alarm at

the cataract of speeches and pronouncements on the subject that roars forth advice to the business man who feels that he is a public relations defective. Mr. Wright has not spurned these embossed booklets and dissertations; rather he makes use of them, finding the essence of the cataract in the spray and packing samples of this in his chapters. The book is probably the most helpful volume on the subject that has yet been offered.

"From Salesman To Sales Manager"

ALMOST every young salesman aspires to be some day a sales manager, but few have any knowledge of how they should train themselves to reach that executive position. There is need for much more than sales ability; certainly the "star" salesman is not necessarily the man who should automatically become a sales manager.

In a book just published, "From Salesman to Sales Manager" (Pitman & Sons, Ltd., 3s. 6d.), B. Hargreaves Wood deals with this problem. Point by point he discusses a career in selling, from junior salesman to top rank sales executive. It makes interesting and instructive reading, the sort of book which a firm should recommend all its salesmen, old and young, to read.

Here is One Method for CUTTING Those Electricity Costs

AS there are over 1,000 methods of charging for electricity in Great Britain, one manufacturer often pays more for light and power than does another who obtains current from the same supply company. There is, indeed, a good deal of confusion in many phases of contracting for electricity supply. Some manufacturers, for example, install extra electrical equipment to obtain advantage of the two-part tariff, an unnecessary expense.

There are several ways to reduce electricity costs and get better value for money. One way is to join the Electricity Consumers Association, Ltd., a non-profit-making, non-party and non-trading organization. The Association provides these free services: (a) technical advice by experts on distribution and supply problems; (b) advice on new electricity agreements, correspondence and negotiation; (c) guidance on electricity legislation.

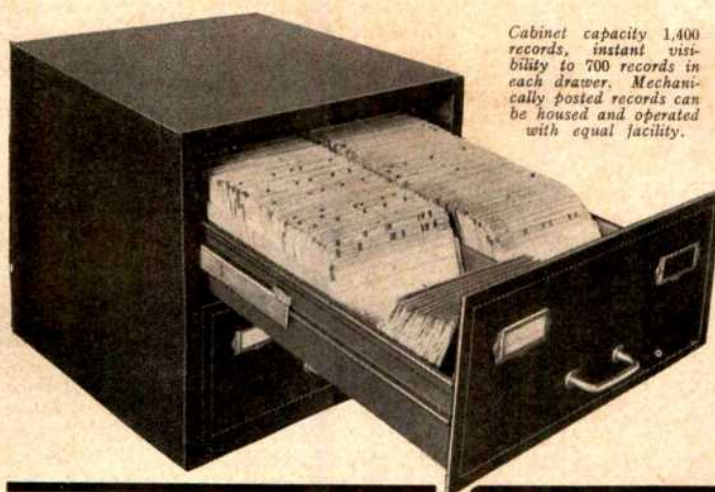
In brief, manufacturers receive competent assistance on every phase of the consumer-supplier relationship.

There are many good examples of practical results obtained. For instance, W. Grafton and Son, Ltd.,
(Continued on page 46)

VIS-ALL *is the only visible record equipment which will accommodate :* **STANDARD OR NON-STANDARD SIZES OF RECORDS AND PERMIT UNLIMITED "PACK-UP"**

To those who may doubt whether their volume of business or field of operation is large enough to justify the cost of applying a system of visible recording, the VIS-ALL system has been proved to effect proportionate economies in operating *any number of records from 100 up to 40,000.*

The VIS-ALL system applies to control of SALES,



Cabinet capacity 1,400 records, instant visibility to 700 records in each drawer. Mechanically posted records can be housed and operated with equal facility.

ACCOUNTS, STOCK, WORKS-PROGRESS, STATISTICAL RECORDING, etc., etc., in any type of concern and in any sphere of operation.

UNRIVALLED FOR MACHINE POSTED RECORDS

The cost is low enough to bring the advantages of visual control within reach of everyone, and there is no reason to-day why the management endeavours of any business need be handicapped by incomplete information.

- Instant Visibility
- No difficulty with record "pack-up"
- Adaptability to any system of recording
- All the advantages of Signal Control can be applied
- Existing cards, whether of Standard or NON-Standard size, can be accommodated
- Prices within the reach of everyone

VIS-ALL LIMITED
BRAZENNOSE STREET - MANCHESTER

Blackfriars 9086.

Second-Hand OFFICE FURNITURE

*Half the price of new
—and twice as good!*

Largest stock in England—including Desks, Filing Cabinets (Wood and Steel), Plan Cabinets, Safes, Typewriters, Adding Machines, etc. etc.

Send particulars of your requirements

Office Equipment Co.

113 HIGH HOLBORN, LONDON, W.C.1
(Opposite Holborn Tube Station). Phone: HOLborn 8235 & 2564
and 79 VICTORIA STREET, S.W.1

World-Famous **ACE STAPLING MACHINES**



No. 102 30/-



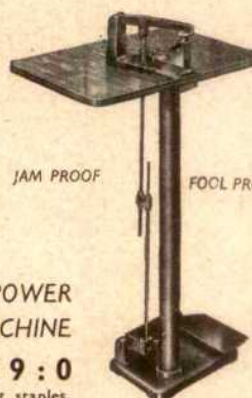
No. 702 30/-
Incl. 5,000 staples



No. 402 22/6



No. 302 15/-



ACE FOOT POWER
TREADLE MACHINE

No. 111 £9 : 9 : 0
using 1/2" and 3/4" leg staples.



No. 202 10/6
Incl. 1,000 staples

All-Steel Construction

Guarantees up to 25 years.

Illustrated leaflets and particulars on request to

The Standard Office Supplies Co.

9 LOVELLS COURT · PATERNOSTER ROW · LONDON · E.C.4
Phone: City 7211 (4 lines) Grams: Standcarb, Cent., London.



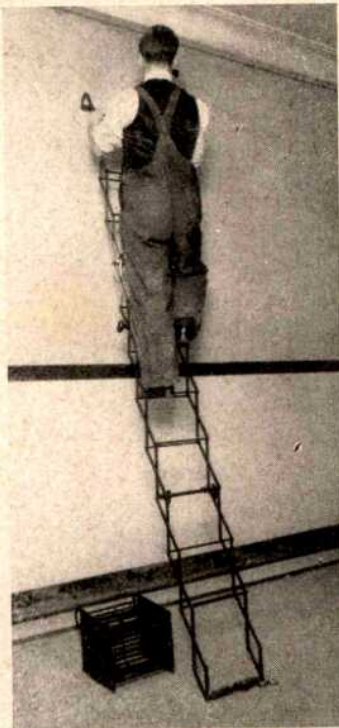
Evacuation of Staff

YOU NEED THE

PACKAWAY

ALL-STEEL

FOLDING LADDER



The Packaway Ladder is as light and easy to carry as a suitcase, yet is very strongly constructed to stand hard usage. It takes up very little storage space. Further, it can be used equally well inside or outside a building, and for all general purposes.

Write for illustrated leaflet with sizes, prices and further details.

★ Our FACTORY A.R.P. HANDBOOK is full of useful information, with illustrations and lists of all equipment. Let us send you one. No obligation. ★

Beatties of Southgate

SAFETY HOUSE,
11 TUDOR WAY, LONDON, N.14

Palmer's Green 6323

Management's A.R.P. Problems - - -

(Continued from page 18)

the personal views of the directors, and so on. Only an expert could give advice on the matter. It is not possible to generalize. Each case must be considered on its merits.

The points examined so far show the specific dangers that must be met by each firm that builds shelters. With these factors clearly in mind executives can next think of the secondary uses for shelters. As costs of protection will in any case be considerable, you might as well get some return for money spent, if possible. For instance, shelters might be used in peace-time as store places, garages, etc. Where refuges are constructed on land adjoining the factory—as they are in many cases—you may build them to fit in with future extensions. They could, for example, form a foundation or basement of a future building.

Location of a shelter is, of course, of first importance. It should be built at a point where it is equally accessible to all members of the staff. If you construct more than one refuge, they should all give equal protection.

Another vital point is that every shelter, no matter how small, must have proper lavatory and drainage provisions. First-aid equipment and personnel are also necessary.

Naturally, the size and type of shelters will be determined to a large extent by the number of staff. (Location of factory and other factors have already been mentioned.) A point to keep in mind here is this: What will be the size of your staff in time of war? In some firms many more persons will be employed; in others the staff will be reduced to skeleton proportions. These points should be considered now if you wish to avoid unnecessary expense, trouble and danger.

Summed up, there are five main points for executives to bear in mind in providing shelters. They are: (1) shelters should be below or mainly below ground, with adequate drainage and sanitation; (2) at least 6 sq. ft. floor space must be allowed per person; (3) each shelter should have at least two entrances; (4) expert advice and help should be obtained in determining (a) the degree of protection necessary, (b) the type of shelter which, therefore, is needed (and in most cases it will be found best to have shelters constructed under the supervision of A.R.P. experts and firms qualified to do the work); (5) economic uses for shelters should be kept in mind.

Obviously a good deal of even preliminary A.R.P. work is outside the field of executives. It is, in fact, dangerous for investigations, schemes and plans to be taken up by an amateur. Consultations with engineers and other qualified persons is essential.

Fortunately there exist organizations from which business men can get full-

scale advice and help. One of these is the Cement & Concrete Association, 52 Grosvenor Gardens, Victoria, London, S.W.1. This body maintains a staff of engineers, architects and other qualified persons to deal with A.R.P. construction problems. The service provided is free of any charge or obligation, as the Association is a non-profit-making body. Its function is to advise and help on all problems connected with the use of cement or concrete, except, of course, in preparing detail plans, etc.

Shelters in Buildings

(Continued from page 19)

it takes each employee to reach an assigned shelter. These tests may reveal need to modify stairways, entrances, etc.

There are, of course, many factors to consider in making a shelter really effective. Shelters, for instance, should be under the centre of the building, not against outer walls. They should not be near boilers, below water tanks, heavy machinery, and so on. The reasons are obvious.

A position under a central corridor is usually an advantage. The ceiling span is small. This provides additional protection and keeps down the costs of reinforcing to the necessary strength.

Outside walling which projects above ground level should be splinter-proof. It is not usually difficult or costly to reinforce weak walls. A 15 in. thickness of mass concrete or a 12 in. thickness of reinforced concrete is sufficient.

Another factor of importance is the amount of walling needed in the basement to enclose the shelter space, form gas-locks, and provide lavatories and sanitation, etc. Emergency exits are also needed. They must be designed and placed so as not to become blocked with debris. Then, too, reinforced concrete passages to the shelters from ground level are usually needed. But these are all points which only an expert can decide.

It has already been pointed out that to guard against a direct hit is unnecessary and uneconomical. The main consideration is to make the shelter safe against collapse of the building above. It is not likely that a bomb will drop directly on your building; more probably one will drop near by. In that case the blast may blow down the walls.

Original, detail plans of your building are needed to determine the strength of the basement roof. If these are not available examination by competent architects and building engineers will reveal the facts. Obviously, strength of walls and floors must be known. Reinforcement will likely be needed to take the additional burden.

Costs of constructing basement shelters vary to a great extent. There are so many factors to be considered—size, type, condition and nature of the base-

(Concluded on page 44)

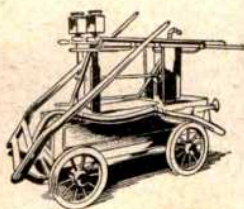
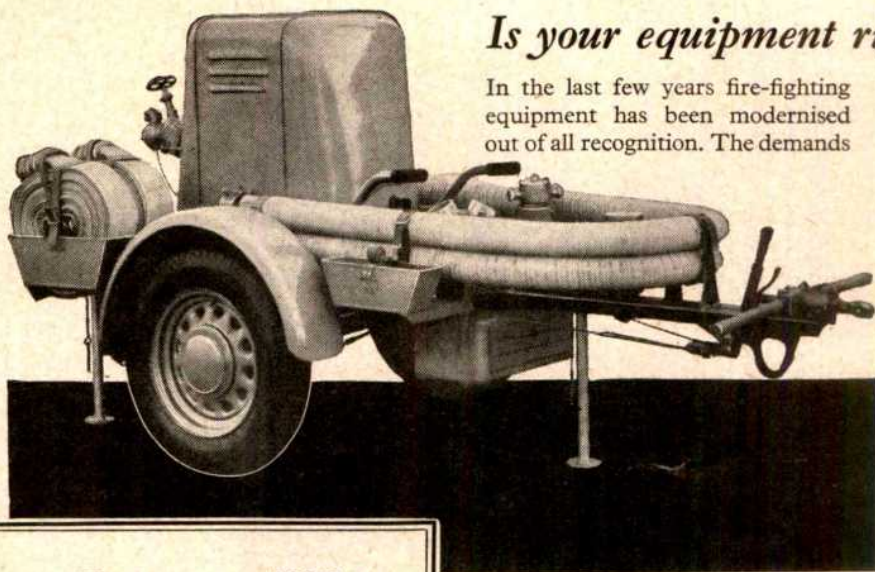
The last word in FIRE-FIGHTING

Is your equipment right up to date?

In the last few years fire-fighting equipment has been modernised out of all recognition. The demands

of A.R.P. have recently given new impetus to the evolution of mobile yet extremely efficient fire-fighting units. Outstanding among these is the 'Sigma' detachable type Trailer Pump, MG 3/II, with an output of 120-180 gallons per minute. This model has been approved by the Fire Brigades Division of the Home Office after exhaustive and comparative tests. Official approval of our units is amply demonstrated by recent Home Office orders for 3,500 pumps and the fact that over 200 Fire Brigades are using them.

Full particulars and catalogue of Sigmund Fire Appliances gladly sent on request.



1800 This old hand pump comes from Grimsby. It is a survival from the days when fire-fighting was rather a forlorn hope. But we can still respect it as an ancestor of the efficient 'Sigma' pumps of to-day.

SIGMUND PUMPS

Sigmund Pumps (Great Britain) Ltd. Works: Kingsway, Team Valley, Gateshead-on-Tyne, 11. Tel. Low Fell 76030. London Office: Bush House, London, W.C.2. Tel. Temple Bar 6296/7.

Facts and Ideas for Advertisers that you can Use with Profit

IF you could gather for yourself all the latest news, developments, and the most successful plans in the advertising field, and those selling methods proved soundest in selling practice—

How much would it be worth to you?

Pounds and Pounds! For it would help you to get more out of your advertising and to increase your turnover and profits. But the cost, if you did it yourself, would be prohibitive.

Here is a way you can do it for less than a penny a day

For in the pages of the ADVERTISER'S WEEKLY there comes to your desk every Thursday just such a complete report as you could wish for, on the most recent news and developments in advertising and selling and in the latest ideas in Press, Poster, Direct-Mail, Outdoor, Sign, Film, Novelty and every other branch of advertising. In addition, you also get Marketing Surveys both regional and overseas, which show you the sales possibilities and facilities in all the markets covered.

To secure all these sales and advertising ideas, facts and data regularly every week, you need simply order your newsagent to deliver "ADVERTISER'S WEEKLY" every Thursday morning. Or, if you prefer, first send a post card for a specimen copy TO-DAY to the Publishers:—

Advertiser's Weekly

BUSINESS PUBLICATIONS LTD., Dept. B.O.
WHITEFRIARS HOUSE, TALLIS ST., LONDON, E.C.4



It takes the NEW Threepenny Piece:

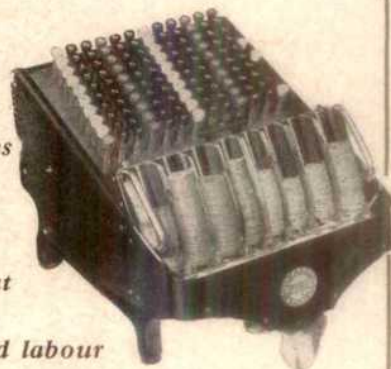
Whether you use

Envelopes, Tins, Racks

or Direct Payment,

A Brandt will cut out

unnecessary time and labour



There are now more than forty wages paying systems that are standard methods of fitting the machine into existing conditions, but whatever your system may be you may be assured that the best efforts of our Local Representative and System Department will be expended in achieving the maximum economies.

* Call, write or phone to-day for "A PAYING CONCERN" (FREE)

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DON'T TAKE THE RISK

*of heavy loss through
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The "GENERAL," with a staff of highly-qualified specialist engineers, will for a small annual fee provide Insurance, combined with the regular inspections and reports required by the Boiler Explosions Acts and the Factories Act 1937.

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ASSURANCE CORPORATION, LIMITED

Engineering Department :
GENERAL BUILDINGS, ALDWYCH, LONDON, W.C.2



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seating
relieves
monotony*

Let the scientifically positioned backrest of EVERTAUT Works Seating take the strain of a day's work and not your workers. Send for full details of our complete range of over twenty models

install **EVERTAUT** *steel*
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SEATING

● SEND FOR FULL DETAILS TO:
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WALSALL RD., PERRY BARR, B'HAM. 22

Avoiding the W.P.B.

Make your advertising literature waste paper basket proof! You must or else your expenditure is being poured down the drain. How? By using "snappy" copy, brilliant illustrations and ensuring a first class printing job by entrusting your print problems to

BEMROSE
AND SONS LIMITED

Africa House, Kingsway, W.C.2
Midland Place, Derby
Daimler House, 33 Paradise Street,
Birmingham, 1

(Continued from page 42)

ment, type and condition of the building above, location and so on. It is not possible to generalize. The most that can be said on costs is that they range from, say, £100 to some thousands of pounds.

Readers of BUSINESS are especially invited to submit their problems to the Association. If necessary the Association will send their technicians to investigate on the spot your special A.R.P. shelter problems.

How File Transfers Can Be Made

WHILE transfers from active to inactive files offer few theoretical difficulties, they have nevertheless become the bane of office management. Too frequently, in offices where the transfer of files is periodical, the movement of papers from the current to storage filing systems rivals the confusion attendant to house-cleaning in a private home.

Contents of the active files should not be moved to storage or semi-active files until they begin to crowd the files to the point of inefficiency. Arbitrarily assigning times of transfer (such as every January, for example) is not conducive to maximum filing efficiency unless the times of transfer are frequent. When transfers are made periodically (say, every year) the current files are only partly filled in the first six months and overcrowded during the remaining half-year. Some firms have solved the problem by an irregular system of transfer, moving the contents, or part of the contents, of a folder or compartment to the storage files when the folder or compartment becomes crowded.

Carry-over System Is Necessary

Unless the storage files are as accessible (or nearly so) as the current files, auxiliary (or semi-active) files or some system of carry-over commonly become necessary. Double-capacity files are in many cases an excellent solution of the problem.

V

ENUS

PENCILS

VENUS PENCILS are incomparably smooth and long lasting, their standard of quality never varies.

MADE IN ENGLAND
KNOWN THROUGHOUT THE WORLD

If you will state the nature of your work and choose two different grades which you think most likely to suit, we shall be very glad to send you samples to try.

VENUS PENCIL Co. Ltd., LONDON, E.5



From 6b
softest, to
9b, hardest

Management Notes

(Continued from page 11)

manufacturing costs have been fairly stable all the time, and selling costs have not been lowered—they are higher, if anything.

Obviously the firm misjudged the market. That is a danger if you fix an arbitrary selling price instead of basing the price of total costs plus reasonable profit. If you intend to sell at a certain price irrespective of the true economic price, you must first determine that the public will "take it." You must also be prepared to meet competition, to bring down your retail prices.

Public Resentment Means Trade Lost

NOW that is a dangerous business, especially if the price cuts are big. The public does notice the cut—and it resents the inference that you have been charging a price that is much too high.

The effects of this resentment is often to drive customers to your competitors. This has happened to some extent in the case quoted. A rival who came late in the field with a shaver selling at £3 7s. 6d. has had immediate big success. Despite the slightly higher price of the newcomer, an enormous amount of business has been taken from the first company.

Have you read the 50 vital points in the new A.R.P. Bill on pages 16 and 17? Every executive should study the Bill.

The effects would, without doubt, have been worse had the first firm not reduced the price of their shavers to £3 3s. before the rival appeared. That was a courageous step which the new management took.

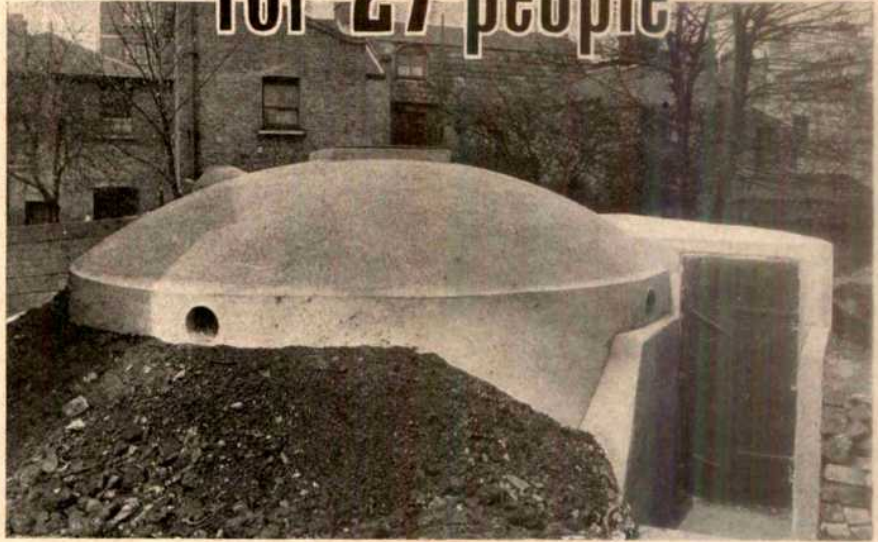
But the history of this case still leaves unanswered the problem of what price policy is best. What are your experiences and your views on this subject?

Co-operative Policy On Trading Estates

THE growth of the modern industrial estate is helpful to management in more ways than are obvious. The system of grouping factories, for example, has developed inter-trading of firms in the group. In many instances it has led to improved processes.

One of the most important effects on policy is that the system encourages partnership schemes among companies located on the same trading estate. Firms find that they can operate jointly many departments. In some cases, of course, the relationship becomes much closer. Whatever the arrangement may be, the result is more efficient management in production, office and sales departments.

A reinforced concrete Shelter for 27 people



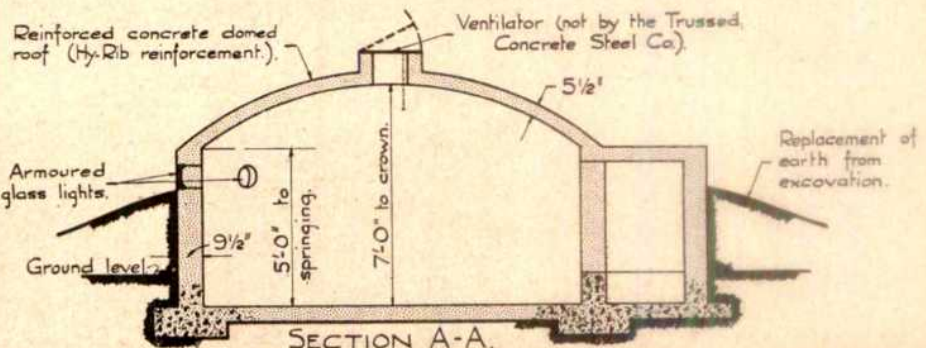
PROOF AGAINST SPLINTERS AND BLAST

Here is an eminently practical type of shelter designed by engineers which is being adopted by industrial concerns for their employees. It is circular on plan with a domed roof to afford the maximum protection against flying missiles. Construction is of reinforced concrete throughout. Hy-Rib supplies the reinforcement to both faces and at the same time forms an economic and convenient shuttering to the circular walls and domed roof. The use of Hy-Rib as combined reinforcement and curved shuttering makes this shelter pre-eminently suitable for construction by the local builder. Similarly designed shelters can also be erected to accommodate 16 or 6 people. Full details may be had from:

THE TRUSSED CONCRETE STEEL CO. LTD. ARP Dept. 8, Horseferry House, Westminster, London, S.W.1

Telephone: Vic 4477 (12 lines)

Branch Offices at BIRMINGHAM, LIVERPOOL, MANCHESTER
NEWCASTLE-UPON-TYNE, TAUNTON, CARDIFF, GLASGOW



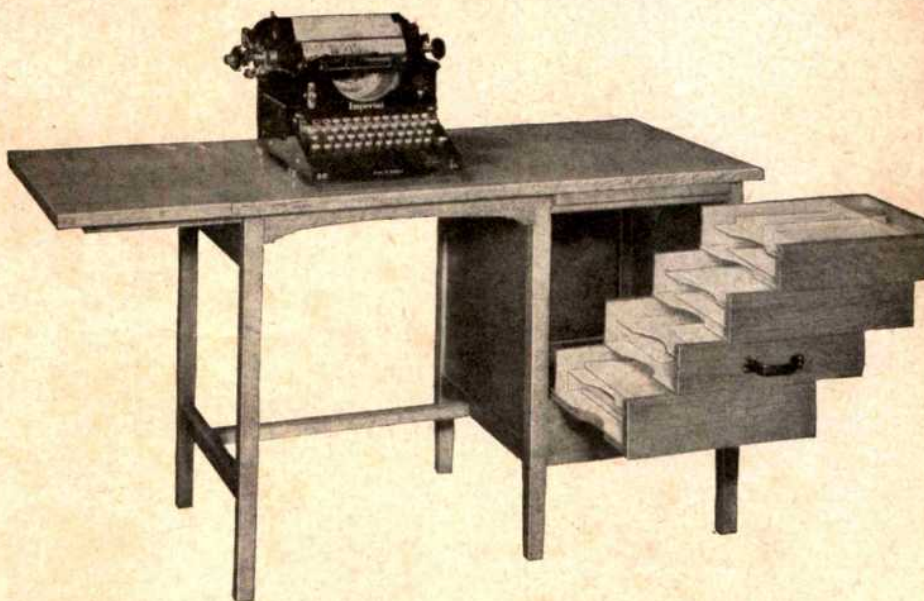
Here's a New Labour-Saving Typist's Desk For Your Office Staff

THIS new typist's desk, incorporating time- and labour-saving features, has just been put on the market.

Most typists use a variety of stationery in ordinary routine work—correspondence, invoicing, branch memos, stationery, etc. All must be typed on different forms and letter-headings. In desks with ordinary drawer fittings, without special provision for keeping various stationery separate, these forms soon become mixed. Time is wasted, material damaged, work impeded in the search for the right form.

Cantilever Pedestal Fitting is Used

The new Shannon Typist's Compact desk solves this problem very effectively. The desk pedestal fitting is of cantilever type, and all the contents of the four double compartment drawers



Here we are again

With another little message to remind you that there's no end to our efforts to persuade you to let us do some of your printing.

Armchair selling won't bring customers. You've got to be "up and at 'em" and make them want before they'll buy.

Printed matter performs the most important function of making known your service and your products.

For successful printed matter consult us.

Let us quote for your next job.

WM. DRESSER & SONS

LIMITED

Publicity Printers

CROWN STREET, DARLINGTON

Write or phone 2125



NEED YOUR RECORDING TAKE SO LONG?

"ROBIN" Looseleaf Books have helped hundreds of concerns to reduce their record-keeping time.

Economical in first cost and in maintenance. Old leaves can be removed and new ones inserted in a moment.

A glance at the index and a few flicks of the finger reveal any entry desired.

Would you like to give them a trial yourself? The outfit below is offered on seven days' approval.

"ROBIN" Looseleaf Book, 5" x 8", comprising binder bound full maroon buckram, A-Z index and 200 leaves (feint, cash or double ledger—please state which required) 9/6 or bound half maroon pigskin ... 13/-

J. W. RUDDOCK & SONS

Looseleaf Book Manufacturers

LINCOLN

and at 3 Old Jewry, LONDON, E.C.2

are accessible at a single opening with two movements. Below is an additional pull-out drawer for personal belongings, etc. In the top compartment are divisions for narrow stationery forms, for typewriter ribbon and paper-clip boxes. The desk-top is laminated. There is a 12 in. extension flap on the left.

Here is One Method for Cutting those Electricity Costs

(Continued from page 40)

London, recently reduced their annual electricity charges by £30. In other cases, a food manufacturer saved £800 and a domestic appliance manufacturer cut costs by £1,200.

If you are interested in the service given write to: Electricity Consumers Association, Ltd., 46 Victoria Street, London, S.W.1.

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The LONDON & LANCASHIRE Insurance Co. Ltd.
CHIEF ADMINISTRATION
7 CHANCERY LANE, LONDON, W.C.2

Build Dealer's Sales

(Continued from page 36)

discovered at home, as most amateur painters do, that the only brush in the house was full of brown paint from the last job, he would have been annoyed. He would have bought a clean brush—probably at another shop.

To these suggestions many of your retailers may say: "This is all very well, but it is impossible to get my assistants to take so much interest." That indicates a major fault: your dealers have not a system to give the facts about the true value of each assistant to the business.

By using one machine any of your dealers can have a system which will do all that is described in this article. The cost of the machine is low; savings effected and extra profits made soon repay the capital outlay.

As a manufacturer it is in your interests to encourage if not help your dealers to run their businesses for greater profit. Here, then, is the type of machine and system that your traveller should bring to the notice of all your dealers. As a start, you might give your retailers this article to read!



This "Empire" clock has recently been put into the new court-room of the Bank of England by The Synchronome Co., Ltd. It tells the time in the Dominions and elsewhere in the Empire and functions, too, as an ordinary 12-hour clock.

Leabank Chairs preserve the natural upright posture that is healthiest and therefore most efficient for workers of both sexes. Models include low-priced factory series.



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MANY FACTORY AND OFFICE MODELS
Write for free list.

LEABANK CHAIRS LTD.
13 Imperial Buildings,
56 Kingsway, London, W.C.2

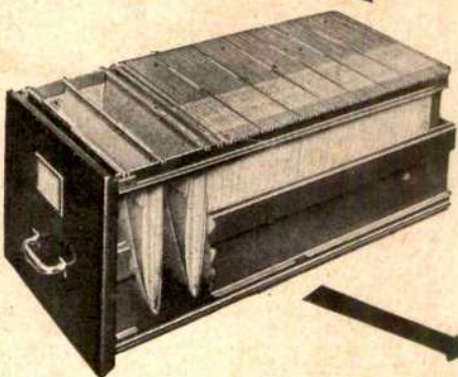
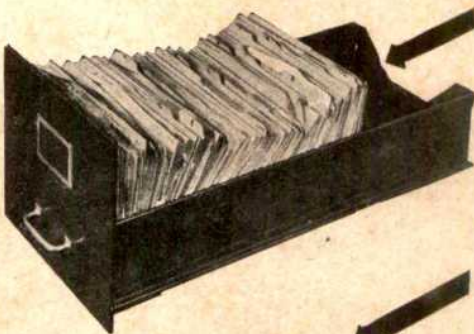
There is no longer any need to use

OUTDATED METHODS OR TO FUMBLE FOR CORRESPONDENCE

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VISIBLE FILING EQUIPMENT
can easily be installed to give you complete visual control at low cost, and without interrupting routine



Here are some benefits of C·V·S

1. C.V.S. can be installed in any standard vertical filing cabinet, quarto or foolscap
2. C.V.S. makes accurate filing and finding faster than by any other method.
3. C.V.S. makes every title visible on a level plane—it is just as easy to find a folder in the lowest drawer as in the top.
4. C.V.S. can be expanded or contracted at will—yet the sequence cannot be broken accidentally.
5. C.V.S. pockets automatically adjust themselves to the bulk of their contents.
6. C.V.S. can be adapted to every method of filing, i.e., alphabetical, numerical, subject, etc.
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TIME RECORDERS LTD.
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TAYLORS FOR ALL TYPEWRITERS

Cash Registers, Coin Changers, Wage Payers, Cashiers, Calculators, Time Recorders, and All Business Appliances, Adding Machines and Duplicators **HIRED AND REPAIRED**

SAVE TIME—HIRE AN ADDER FOR STOCKTAKING

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The Simplest Portable Adding, Listing Machine

Delightful to use.



8 col. to add from 1d. to £99,999 19s. 11d.
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also for ordinary numbers, decimals, etc.
Hand and electric models with or without wide paper carriages.

No Modern Office can afford to be without one.

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THE BIJOU QUIET PORTABLE

Its quietness and light touch are real aids to efficiency, while its compactness, lightness, reliability and beautiful work make it THE BEST. With four-row standard keyboard, complete in case. (Weight 8 lb., nearly 2 lb. lighter than all other 4-bank portables.)

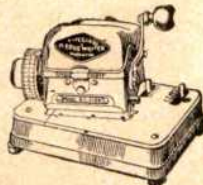
£14 14s 0d.,

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ELIMINATE LOSS AND FRAUD BY USING A "SAFEGUARD" THE BEST CHEQUE PROTECTOR



Used by leading Banks and firms. Do you realize that an altered cheque is your own liability? Great Bargain. £9 9s. each.

All makes of Cheque Writers at half usual prices. Ask for list.



BARGAIN OFFER

Fire-resisting and Vermin-proof Steel Office Cupboards, finished art green, lever lock, duplicate keys.

2 ft. high, 14 in. wide, 12 in. deep. **45/-**

30 in. high, 18 in. wide, 18 in. deep. **£3**

6 ft. high, 2 ft. wide, 18 in. deep, as illustrated. **£4 10**

All carriage paid. Other sizes in stock. Half the price of wood.

Essential for storing Books, Papers, Box Files, Letter Trays.

Other Furniture equally cheap.



THE NO-MORE ERROR LINE GUIDE COPY-HOLDER

saves the typist's time and your notepaper. Tap the lever and the line guide moves down.

Price, as illustrated. **21/-**

And cheaper model. **15/6**



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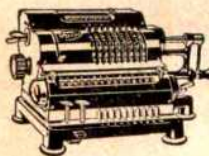
busy office, no torn cheques, etc. **£2 2s. post free**



THIN EDGE ERASER

Acts like propeller pencil, always clean and sharp edged. Best quality nickel plated. **2/6**. 2nd quality nickel plated, **1/2**. Refills **1/6** per dozen.

ROTARY CALCULATORS ALL MAKES FROM £10 10s.



For all calculations. Multiplies, divides, adds and subtracts in 1/10th time taken to do so mentally. 15x10x9. Tens transmission in all dials. from **£29 10s.** Write for details.



USE ORDINARY STAMPS & SAVE 80% IN POSTING TIME

And let your business-getting letters look like personal letters with actual postage stamps by using the **TAPPI** stamp affixer.

Cheaper and quicker than a post marker, all stamps fixed, checked and counted in one operation. British made and guaranteed. **Price £5 5s.**

SPECIAL OFFER NEARLY NEW

Ledger Posting, Book-keeping and Accounting Machines, Loose Leaf, Fanfolds, or Book Writers, with or without Adding and Subtracting of all makes, at bargain prices.

NO MORE ERRORS—JUST USE THE GUARANTEED ADDOMETER

Rapid Automatic Addition and Subtraction. Rests flat on the books. For English and Foreign money. Decimal or Ordinary Figures and Feet and Inches, etc.



FOR POCKET OR DESK

So Simple Any-one can Use it. In Plush-lined, ducoid case.

Size **11½ x 2½ x 1 in.**

77/6 post free.

When ordering state for what purpose required. Also a cheaper pocket Adder for ordinary figures and Indian money, in case. **30/-** post free.



AUTOMATIC SELF-SEALING GUMMING PENCIL. Very useful for desk, applies liquid gum to papers. **1/6**, post free. Similar Article in Rubber to apply moisture to stamps and gummed paper, envelope sealing, etc., **1/6**, post free.

BARGAINS IN FILING CABINETS PRESERVE YOUR LETTERS

and Records from dust and fire by using our **Art Green Vertical Steel Easy Running FILING CABINETS**

4 drawers, 4to, from **£4 10s.**

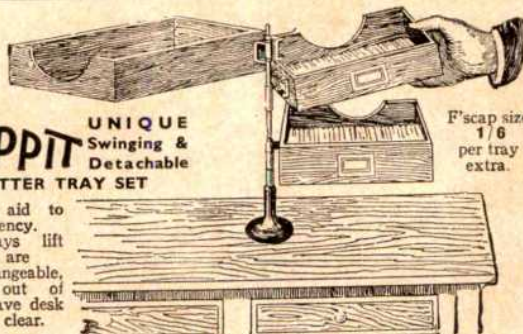
4 drawers, fcap, from **£5 10s.**

Locks **15/-** extra. Carriage paid in Great Britain.



THE TAPPI UNIQUE Swinging & Detachable LETTER TRAY SET

A big aid to efficiency. All trays lift off, are interchangeable, swing out of way, leave desk quite clear.



F'scap size, **1/6** per tray extra.

Material of Trays.	4 Trays.	8 Trays.	2 Trays.
Light or Dark Oak	35/-	31/-	27/-
Real Mahogany	45/-	40/-	35/-
Steel, Finished Art Green	45/-	40/-	35/-

Complete with post and fitting for wall or desk. All inland carriage paid. Approximate internal dimensions of trays **13½ x 9½ x 2½** inches.

Phone: Holborn 3793, or write for Bargain Lists and Particulars.

TAYLORS TYPEWRITER MARKET

TEMPORARY TYPISTS SENT OUT.
74, CHANCERY LANE (Holborn End),
Works: Great New St., E.C.4 London W.C.2

SAVING TIME for Better Thinking

By THOMAS DIXON

DO you remember the story of the workman who invented the safety-pin?

He found his baby crying because it was being scratched by a pin in its clothing.

Then he got his big idea. Why not a pin that could not hurt the baby? He picked up a piece of wire, experimented for a bit and evolved the "safety pin" that has since been sold in hundreds of millions.

The story does not say whether the inventor reaped the material reward that his idea deserved. Probably not: inventors seldom do. *Someone*, however, made a lot of money out of an idea born from the crying of a baby.

Life is like that. Big results come from seemingly trivial causes—so big that sometimes we wonder whether any event or action can be really trivial. You throw a stone idly into a pond. You see the splash, but you don't know how far the ripples will spread.

The great steps in business seldom arise from the spontaneous inspiration of an idle moment. They may *seem* to do so, but in fact they are generally the result of careful study of existing facts and circumstances. No event happens without a cause, and when an emergency arises the best man to deal with it is the one who has studied long and carefully all the circumstances that have led up to the crisis.

That is why it is essential that business executives should, by hook or by crook, ensure for themselves adequate time for close, concentrated, constructive thinking. Paradoxical though it may seem, the really "big" business man is seldom so profitably busy as when he is apparently idle.

You can be sure he is not wasting time. His apparent idleness is merely the "cover" behind which a keen brain is turning the searchlight on all the many problems that confront him. He studies them from every angle, envisages how they react on each other, ponders deeply on all foreseeable developments. Then, when the unexpected happens, he is the better fitted to deal with it because he understands the problem as a whole. He is far less likely to fall into disastrous error than the man who has been so "busy" that he has not had time to give adequate thought and study to all the circumstances.

How to gain the time for this constructive thinking is the executive's greatest problem. There is so much to be done: so many things demand attention: the day is gone almost before it seems to have begun.

The golden rule is to *get things done promptly*. Delay breeds further delay. To get things cleaned out of the way is the greatest of all aids to winning the time that must be devoted to serious thinking if any business is to be successful.

It is here that the dictating machine helps as nothing else does or can. It enables the executive instantly to clear out of the way matters that would otherwise "hang about," distracting his attention from other things and putting a most undesirable strain on his memory.

Do not make the mistake of regarding the Dictaphone merely as a machine for dealing with *letters*. It is, in fact, something far more than this—a method of *control* which gives you a firmer and more positive power to handle every business topic immediately it arises.

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That is where the Dictaphone is the greatest help to the busy man. It gives him the power of instant control. It enables him to put his executive thought into earlier operation, to get speedier action from his subordinates, to delegate to others the responsibility for carrying out his instructions and wishes.

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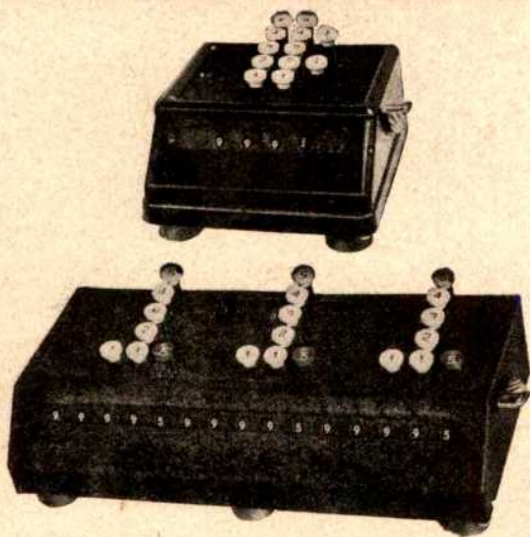
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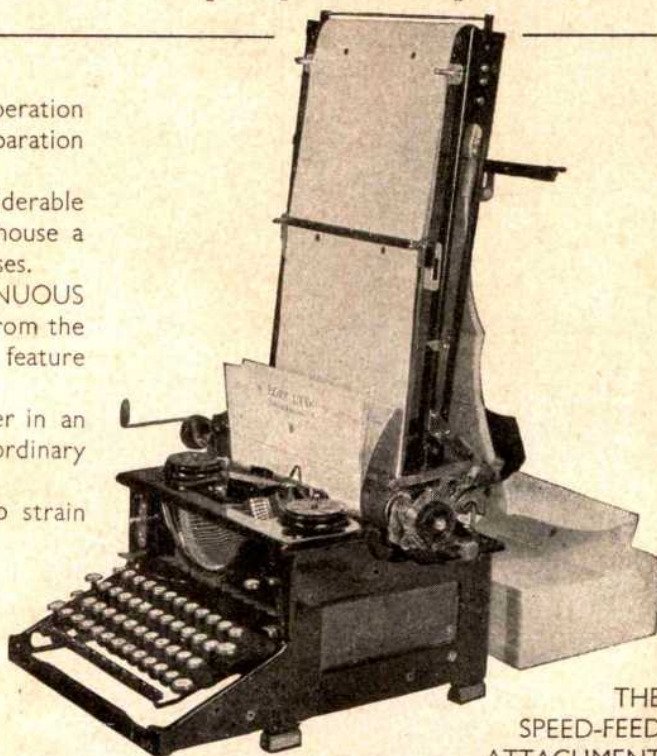
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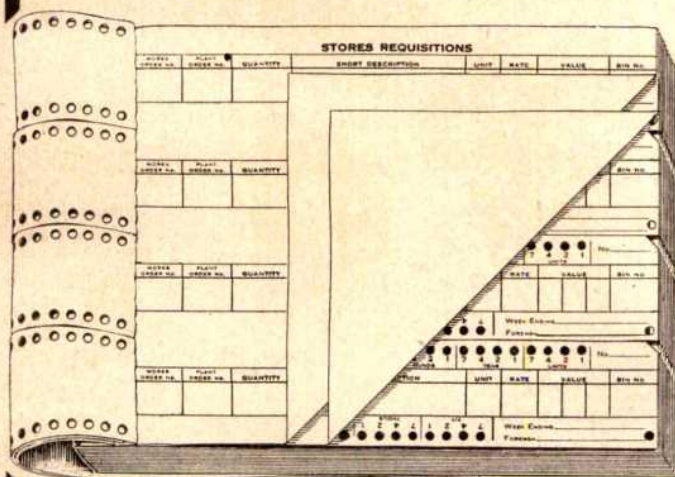
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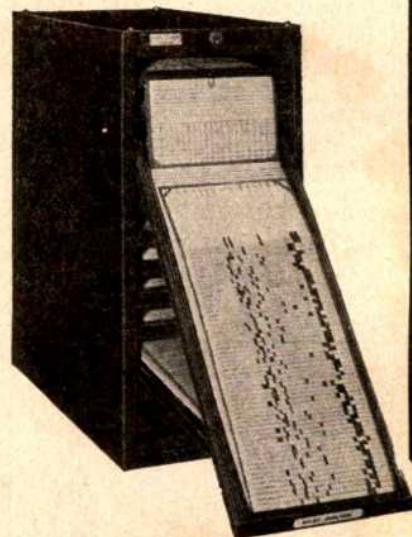
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To-day's 4 Problems Are—

DIFFICULTIES which face management have crystallized in the past month. Four of the most formidable are those listed in the title of this short survey. Let us take them in turn:

ONE : The labour shortage, for a year or more felt by machine tool-makers, is now spreading to harass manufacturers in a wide field of engineering—and in many other skilled trades as well.

The Education Act which raises the school-leaving age, the Factories Act which affects women and young people in employment, and the Military Service Bill, as well as the heavy pull from armament and other Government work, are all factors which are squeezing the labour market and making for many manufacturers problems that will increase as time goes on.

Can You Act Along Any of These Lines?

"Dilution," as applied to labour, is a term we do not like to use, it has a too unhappy past, but to meet this labour poser managements must get busy on *some* line of action. For instance:

(a) Have you any skilled workers wasting their time on semi-skilled work? If so, move them; concentrate them on more vital work and fill in by promoting from lower down.

(b) Can you, in some parts of the works, break down operations, simplify them, so they can be done by less skilled workers, women, or even juniors?

(c) Can you "group" operations and so cut down the number of staff needed without jeopardizing output?

(d) Have you got busy on a scheme of intensive training for all lower ranks with a view to having understudies ready for promotion to the most skilled jobs as the pressure increases?

Handling Staff So They stay With You

Another burning problem is that of retaining workers. To-day it is an employees' market. Nobody is going to stay long in a place where he is uncomfortable. Even a high wage

1. Labour. .

The Shortage of Skilled Labour is Increasing

2. Materials

Some Raw Materials will Become More Scarce

3. Output. .

Volumes will have to be Progressively Increased

4. Markets

Sales Policies will need Complete 'Reorientation'



By THE EDITORS

standard does not compensate for lack of other amenities.

Management must develop a policy of good relationship as between executive and staff. Chances for promotion must be made clear. Working conditions must be good. True, the Factories Act now *compels* certain higher standards of cleanliness, safety, lighting, sanitary, ventilation, heating, and other conditions. But wise management must go beyond the mere letter of the law.

It can never be too heavily emphasized that a primary duty of a board is the *understanding control of human men and women.*

Plant and machinery have no sensibilities; their control offers no problems, needs no skill, compared with that essential for the good handling of staff.

To retain your workpeople, therefore, you must provide everything in your power for staff health and comfort, as well as efficiency. Quite apart from Factory Act requirements, study the *extra* need for personal health, special rest pauses, free refreshments, canteens, broadcast music, sports, and the social end generally.

TWO : Already there is scarcity of some raw and semi-raw materials.

The production of steel, for example, is approaching capacity, though the vast new Ebbw Vale plant is now in production. Iron, copper, zinc, spelter, tin, rubber, and even such products as coal and foodstuffs are bound to feel the pinch, too. Not only our own Ministries, but those of France, the United States, and others will also be absorbing huge supplies.

See that These Questions are Looked Into

Energetic action must be taken. Management can do many things:

(a) Investigate all sources of supply and, where possible, make contacts with new suppliers.

(b) Find out what possible substitute materials can be obtained and used.

(c) Inquire into the present methods of buying and see if they can be improved.

(d) Organize sustained effort to cut down waste in the factory.

(e) Investigate chances of modifying your existing products so that less of the most "difficult" types of materials is used.

(f) See if you have any redundant lines, or poor sellers, that can be cut out of production.

THREE : In almost every business there will be demands for greater output. But this will have to be achieved in face of the labour and materials shortage just indicated.

First step in this direction, therefore, is to make more use of machinery. Do this by:

(a) Using machines for work formerly done wholly or partly by hand.

(b) Increasing the number of machines or replacing existing ones with bigger capacity units.

(c) Ruthless examination of *all* plant; replacement with better types.

(d) Eliminating all possible "frills" on products and so simplifying production.

(e) Cutting down, as far as practicable, time spent on "refining" processes such as lengthy and careful finishing work on components or the finished products.

FOUR : Reorientation of marketing policy must be general. Certain broad factors can now be foreseen. They are:

(a) Goods that are top-class luxuries will have a restricted market.

(b) Products which can be classed as staple luxuries—cosmetics and beauty preparations of fairly expensive types, better-class women's and men's clothing, jewellery, and so on—will find it hard to hold trade in the near future.

(c) All necessities and staple lines will have an expanding market in which sales are likely to reach new high records.

These factors show that goods which can be graded as middle-class necessities and which are luxuries to the working class, will find an expanding market as boom conditions advance.

As employment increases, wages go up and workers accumulate reserves. Goods of this type will therefore sell in increasing volume.

No less important, there will be a big shift in consumer buying power. This because:

(a) Industrial developments on the western side of Britain will add to the buying power of the mass markets there and, at the same time, attract big volumes of new and well-paid labour to those areas.

(b) There will be a movement, possibly organized by the Government, of labour to all industrial centres where it is most urgently needed.

(c) There will be a big increase in the number of women employed in industry, and consequently in their purchasing power.

(d) There will also be a big increase in the number of young persons employed in industry at good wage rates.

All this will force sales executives to keep up to date with facts about markets. There is vital need, therefore, to organize or extend market research departments and to obtain every kind of information on existing markets. A work such as *Marketing Survey of the United Kingdom* (third edition, 50s.,

Business Publications, Ltd.) will be of great value in framing a sound sales policy and campaign.

Make more use of your salesmen as an active intelligence force. Get them to supply more data about condition of buyers, condition and outlook in territories, chances of expanding business, etc.

Watch all current market information through studying key figures of retail sales; iron, steel, coal, electricity outputs; employment and unemployment returns; cost of living prices; wage levels; read trade papers which reveal changing tastes and demands, etc. All this can help to keep your marketing policy and practice up to date.

Another vital point: if it *does* come to a war, remember that while certain foreign markets would at once close up to manufacturers here, other foreign markets would automatically become open for your exploitation.

In the short compass of this outline specific details about what territories would close and which would open cannot be gone into. But there is the reminder; it holds plenty for export and potential-export managers to think about and plan for—*NOW*.

Wages, and Illness Absentees



It is not necessary for notice of dismissal to be given in order that wages of an employee may be suspended during absence through illness

From
A. H. V. MUIRHEAD
Secretary
Rootes Securities Ltd.

AS supplementary information to the important item published last month (page 40) on the subject of paying staff wages during absence from illness, Mr. Muirhead sends us the following:

Though it has been represented that the decision in the recent case of *Marrison v. Bell* has altered the legal position in respect of liability for wages to employees absent through temporary illness, in that there is an analogy to be drawn between the National Health Insurance Act, 1936, and the Workmen's Compensation Acts, it has, in fact, not enumerated any new legal principle.

Whilst under the Workmen's Compensation Acts during any period for which compensation is payable, the employee's right at Common Law to receipt of full wages during the period of incapacity is

suspended, under the National Health Insurance Acts the benefits conferred are *additional*, their objects being to improve the insured's position by enabling him to obtain extra medicinal and other assistance which he could not otherwise afford.

If an employer's liability to pay wages during temporary illness is considered in the case of persons who are not insurable under the National Health Insurance Acts, it immediately separates itself from the mirage caused by a special fresh source of payment during illness, and becomes clearly distinguished as solely governed by the Law of Contract as between master and servant.

To quote Lord Halsbury on this matter: "A servant is entitled to his wages or salary during absence through temporary

(Continued on page 43)

Executives are Thinking About These Things

"A Stitch in Time . . ." It's Still True

IN two other places in this issue we have indicated the increasing scarcity of some raw materials and the danger of this stringency becoming worse as time goes on.

Among management's other worries this rather perilous situation must not be lost sight of. Sales volume is certain to expand; *manufacture* is going to be the problem.

If you have not already probed this matter, start now to assemble all the information you can about every possible supply-source of raw materials.

Do not be content with a few big-firm alternatives to your regular suppliers. Seek out also all the little firms. When the big fellows are jammed up with priority contracts and other restrictions the little men are often free to give just what you want.

Through lack of this sort of vision thousands of manufacturers during the last war period were seriously caught out; many, indeed, had to shut right down in that first hold-up of materials.

Twenty-five years has not changed the penalty for unpreparedness. Don't you be one to pay it next time.

What Shall We Do With Our Customers?

IT is not known how many manufacturing concerns are busy on Government orders of some sort while a part only of their plants carries on supplying normal civilian markets.

Every firm working thus, however, must do some pretty serious figuring along the lines of "What am I going to do about my regular markets?"

This rearmament activity will not last for ever—at least not at to-day's pressure. Normal business will come back. And when it is on the way back what will be *your* position?

That will depend entirely on the policy you adopt now.

IF you decide that your normal markets are worth holding on to—as most probably you will—then these are some of the questions to which your board must find the answers:

1. Shall we let our normal output decrease?
2. To what extent?
3. At what level shall we maintain it?
4. What is the danger of our customers, through inability to get our products, switching over permanently to competitors?
5. Apart from variations of actual output, to what extent (if any) shall we relax pressure in maintaining

distributive outlets, goodwill and prestige?

6. This involves: shall we lessen advertising (national and/or trade)? shall we reduce number of salesmen or their fields of coverage?

Then, if you favour any of these restrictive moves, you must also satisfy yourself on the question: *When the time comes shall we be able, at economic cost, to win back our normal markets in face of the ground we have lost?*

This Policy Will Pay Best

IT is a nice thing, of course, to have the Government as customer, but it should be emphasized that it is a vital national service to keep normal manufacture at the maximum possible level and so help keep the *business* structure of this country strong for the post-armament time that will soon be here.

WE urge, therefore: keep your customers, even though you have to give them a little less. Retain all your salesmen; tell them to keep up your goodwill all along the line. Maintain your national advertising so as to keep your public; hold to your trade publicity to keep your distributors sweet.

A good plan would be even to frame your trade advertising to tell distributors what you are doing. Explain

why you cannot fulfil all demands but that you will serve everybody equally; appeal to the trade to stand by you in your effort to maintain production while also serving the Government. Keep up quality and service.

Better still, of course, *expand* your normal output. Do not hesitate to put in more plant. Some of the extra machinery may possibly prove redundant when things settle down, but if it does the expense of it will be mere chicken feed compared with the cost of winning back lost markets.

Delays Won't Happen Here

ONE of the soundest cost-saving campaigns that any manufacturer can undertake now is to set up every unit of production machinery and every piece of mechanical equipment into the finest possible trim.

Firms of every size and in all fields of manufacture are busy on this as part of their A.R.P. programme.

Basic reason for this preparedness is that, from now onwards, specialized machines will be progressively more difficult to obtain.

Already there are heavy delays in the supply of some types. Replacement of worn parts now, and substitution now of new for obsolescent plant and auxiliary equipment will safeguard against breakdown later on when conditions have become still more difficult.

IN a large radio company we saw this plant-vetting campaign being carried out by the maintenance engineer and his squad. A hypercritical examination of every machine and every appliance, right down to hand-operated lifting tackle, was being made . . . and the list of recommended renewals was considerable.

In another factory (foodstuffs) we found the works manager in charge of this survey. He had even ordered certain vital machine parts for stock. "I'm not waiting for a breakdown," he told us; "some of this stuff took me two months to get."

In a paper mill the plant superintendent said that when a certain pump was about to be scrapped recently, the shortest time in which a new one could be secured was *five months*.

As an alternative, cheaper in the end, he recommended scrapping the entire system that needed this pump.

Immediate cash outlay for this reconstruction was naturally greater than the price of a new pump. But the total advantages of non-delay and improved efficiency far outweighed the extra cost. The firm went ahead on the idea.

Certainly, this plant-trimming is a highly important precaution to-day.

The Answer Is NO!

"THE head of a business which has been consistently free from mistakes and false starts confided to me recently one of his fundamental administrative policies.

"If one of my subordinates comes to me with some project and states that a decision must be made that day in order to take advantage of some special terms, my answer is always 'No.'

"Not that it takes me a day or a week to make a decision on any project," he explained. "I generally make decisions rather quickly. But when anything simply must be decided on the basis of the clock, and it is submitted to me on that basis, I pretty well know that my subordinate is being stampeded, and I am unwilling to take his judgment.

"In our business every decision must be made on merit and NOT because some great opportunity will have passed for ever if we do not snatch it off with one eye on the clock."—Robert R. Updegraff.

Now, *BUYING'S* the Thing that Calls for the Best in Management Brains

IT was an easy matter to consult the buying records of one year and duplicate the orders, with few variations, for the next. That, in essence, was the routine of the buyer of 15 years ago.

The sales department used to sell what the purchasing department bought. Now the purchasing department buys what the sales department insists it can sell.

To-day, buying is not a one-man proposition. Any management that allows one man, or even one department, to make all buying decisions is headed for financial troubles. I devote as much time to the buying end of the business as I do to supervising production, for purchasing is no longer a routine job.

Purchasing to-day is the science of studying market conditions intelligently and acting upon their indications. It is the science of being sensitized to general business conditions and their effect upon sales.

You Must Act on Facts Not Emotions

Our buying department does not typify pessimism, optimism, or traditional conservatism. We look at the facts coldly and make calculating deductions. For example, we realize that if the general business outlook is gloomy, ours, like all other companies, is bound to feel the effects. Accordingly, we retrench and meet the dull period with low overhead and orderly stocks. On the other hand, an indication of obvious prosperity is not met by traditional conservatism or scepticism. We expand our resources and face the boom with adequate equipment, enough material and facilities for prompt service.

Because ability as historian, prophet, and financier, coupled with an understanding of market conditions and a knowledge of selling and production are the requirements of successful buying, I feel that it is a vital function of management and demands all the time which I can give to it. This is no reflection upon the ability of any buyer, but rather a repetition of the old truism that several minds are better than one.

My first principle in buying is that anything bought on the right basis can be sold on the right basis, or—stronger still—anything bought right is half-sold.

However, there is a time for hand-to-mouth buying. For instance, at the moment of writing, a certain raw material is considerably above its normal price, therefore we shall con-

C. W. NASH

Head of the Nash Motor Co., Says . . .

“Economical, Cost-Saving — yet Non-restrictive Buying can no longer be handled by the one-time ‘buyer,’ as we used to know him

“To-day the responsibility is too great; too many fast moving factors must be considered. The top men in the business must therefore come into play and co-operate in this vital function of Buying”

TWO miles of bins hold the raw materials for this Midland engineering firm. Twelve months ago nearer 3 miles were needed . . . until an expert survey revealed that the old buying system had piled up over £40,000's worth of surplus and dead stock.

To-day, revised plan of scientific buying maintains a fine balance between stock commitments and actual needs



tinue small-piece buying of this commodity until the price comes down. I believe the price is *artificially* high, kept up by certain interests. But it is bound to break.

Last week the manager of the buying department came to me and said:

“I believe now is the time to cover for the next six months.”

“What makes you think so?” I asked.

“First of all,” he answered, “from general conditions and all indications in the trade papers, as well as from contact with salesmen, I believe that the low market is due for a rise.”

“The manufacturers from whom we buy,” he continued, “are suffering their dull season, and consequently they will quote closer and give us better service than during their feast months. Also, this will give them time to organize their forces to the highest point of efficiency.”

Now I knew that this was not the small sales talk of high-pressure representatives, for I had been watching this particular market. I do not have time to study the fluctuations of all markets, so I have limited myself to

this one, knowing that as it forms the basis of our products, it is a fairly safe indicator.

Accordingly, I agreed with the manager's decision and told him to cover for the next six months and take advantage of volume prices.

Head of the Concern Sets the Pace

Up to this point the purchasing department has not actually profited by any contact with the head of the business, but the buyer's next question as to how many units to cover for (or how much money to expend) clearly indicates that accurate buying is dependent upon the prophecies of the active head of the organization. The promises for next season for most industries are favourable, and I could gauge our share of the prosperity, so I told my manager how many units to cover for in excess of the same period of time last year. In short, I was setting the quota of the sales and production departments for a period, and sales were dictating to the purchasing department instead of vice versa.

Thus the buying season sets in and contracts are signed. We do not specify any delivery rate, for as the material is needed we send in formal orders to apply on the contract. Occasionally we over-estimate the quota, and in most cases the factories supplying us will not hold us to our contracts, for they recall times when we have underestimated our needs, and the repeat was usually theirs.

The carrying charge on a six-months' order, which usually applies to the last three months, is negligible in comparison to the money saved when the market price of the commodity goes up.

Another phase of the importance of executive direction in purchasing is that there are times when management is responsible for buying quality at the right price.

Buying is No Longer Done on Mere Price

It has been our policy to patronize the established well-known houses whose product and service have become a criterion in their particular lines. Usually, when their price is a trifle higher than competitors' it is in proportion to better service and quality. If 15 years ago price was the byword of the purchasing agent, today he and his company are not in business. They have been replaced by the management which says, "What price price?" In short, what is to be gained by price if the goods are not delivered in time, or if the bulk quality differs from the salesman's samples?

By and large, I do not favour pioneer purchasing from the unheard-of factory. The pioneer factory's trump card is too often price.

Occasionally, however, we have picked a winner that combines low price with excellent quality and service, but, as the opportunity is rare, changes are weighed carefully before they are made.

But even the seasoned buyer can be "sold" by high-pressure methods, so I become the steely calculating buyer:

"Have the old company given us prompt service?" I ask.

"It has."

"Has the quality of their product never varied?"

"It has not."

"Have all their dealings been square?"

"They have."

"Pioneering is dangerous business. . . ."

"But we can save so much a ton . . ." says our buyer.

Before making any such policy changes I ask a further report from him.

According to the importance of the commodity, either he or one of his assistant buyers visits the factory in question and compares the sample quality with the regular output. He also looks at the equipment with an eye to determining its adequacy for handling heavy orders for immediate delivery. If these two factors appear favourable he investigates the rating of

the company in question to see if it can pay for raw material and finance a large order.

Armed with such facts, the purchasing department is taking no chances, and, as I said before, an occasional pioneer adventure has led to real savings for the company.

A second deviation from general beliefs and practices is our buying hours. If I had never been a salesman I might never have dictated such a policy to the purchasing department.

As a rule, the buyer is selected from the production department; he knows the importance of having material at the right time—material of a high standard, purchased at the right price. He realizes that production cannot be suspended an hour for lack of supplies, or overheads will eat all the profits. But beyond this, the ex-production man is not interested. Usually he has never sold goods, and here management dictation is essential.

I believe that every man who spends his or his company's money to see our buyers is entitled to an interested audience. This is not only a belief of mine, it is an iron-clad policy in our company. Furthermore, whether he presents his card at 9 a.m. or at 4:30 p.m., he does not leave without seeing one of the buyers.

The buyer answers his mail before or after interviews, instead of the sales-

men adjusting their calls to the buyer's leisure. The only rule so far as the salesmen are concerned is that each fills out a card stating his business and waits his turn. The card again saves the salesman's time, for very often he is directed to another department.

The actual department consists of the head buyer, assistant buyers, stock chasers, and detail clerks. While the head buyer aims to spend some time talking to the foremen and inspecting the plant each week, when he is busy his assistants are sent out. Thus there is always a representative of the buying department available.

A Good Buyer Can Release Working Capital

I contend that you can learn more in one day's practical contact than you can in a week inside. This is not only valuable training for junior men in the purchasing department, but is an accurate check-up on inventory.

Because it requires more capital to do the same amount of business to-day than it did 15 years ago, turnover has become a more vital consideration of the buyer. It is within his power to release working capital and thus increase net profits.

An example of our realization of the growing importance of purchasing

(Continued on page 45)

No Annoying 'Hold On Please'

MANY executives hold to the idea that it is *infra dig.* to answer their own telephone bells. Generally they depute their secretaries to play first obstacle to ringers-up.

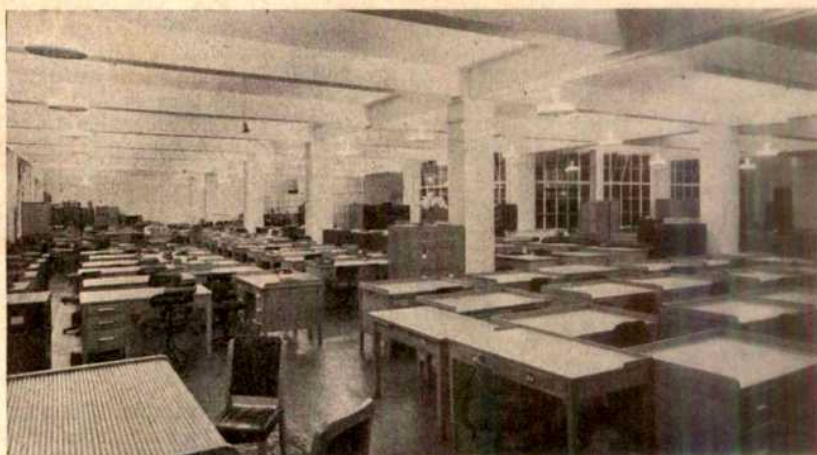
We were therefore interested when we noticed, in one large firm, the invariable rule for top executives to answer their own incoming calls.

"We studied the matter from the caller's angle instead of purely from the more selfish standpoint of our own

convenience," a director explained.

"In these days of hard-to-get business we want the route between us and prospective buyers to be as free as possible from obstacles. Not every caller, of course, is a prospect. But there is every advantage in treating him as such, then nobody can have any complaints.

"No, our executives are not bothered with trivial calls. A very carefully selected and trained switchboard operator is the secret."



The acknowledged efficiency in the Marks & Spencer organization is due in great measure to the highly efficient standard of artificial lighting in their offices. This indirect, glareless installation was recently put into their new Orchard Street offices by G.V.D. Illuminators Ltd.

Staggered Pay-days Smooth Out Weekly 'Peaks' in Wages dept.

says D. G. GRANTHAM

Secretary, The Telegraph Condenser Company Ltd.

THE article, "Staggered Pay-Days to Help Management," in the May issue of BUSINESS touches an important subject.

In our company we have not gone to the extent of paying each main department on a different day, though this "staggered" arrangement as suggested

by Mr. Grantham Cunningham of the "Triplex" Safety Glass Co., Ltd., would, I feel sure, work excellently in very large firms. We have, however, for a considerable time staggered our salaries and wages pay rolls.

Our year is divided into 13 equal 4-weekly periods, each week ending on a

Tuesday. A cheque is drawn each Tuesday morning in respect of our salaried employees* (numbering about 200) and the money is paid out on Tuesday afternoon.

The pay roll week for piece-workers and day-workers (numbering about 1,000) ends on Tuesday, and on Wednesday and Thursday the pay roll is made up, the actual pay-out being made on Friday afternoon.

This arrangement has worked very well, and while we have, in fact, retained Friday as pay day for the majority of the staff there is a lot to be said for changing that day, too. Compilation of the factory pay roll naturally takes a day or two, but we could, I think, quite well end our factory week on a Sunday night, make up wages Monday and Tuesday, and pay out on Wednesday. We may give this our consideration.

Such a plan would, as Mr. Cunningham says, make for easier clerical work and would obviate the pressure of week-end shopping for the families of wage-earning employees.

On the other hand, one has to consider the point that many families in this category like to have their money on the Friday as it gives them a fuller purse for week-end purchasing. Also it enables them to do their shopping at a time—Saturday evenings for example—when there is a chance possibly of better bargains. Before we take any decision towards further "staggering" therefore, this point will have to be carefully surveyed.

Our management has, however, derived considerable benefit from the staggered arrangement we are already operating. The clerical work in the wages department has been smoothed and the usual high-pressure peak much lessened.

*Excluding, of course, higher officials who are paid by 4-weekly cheque.

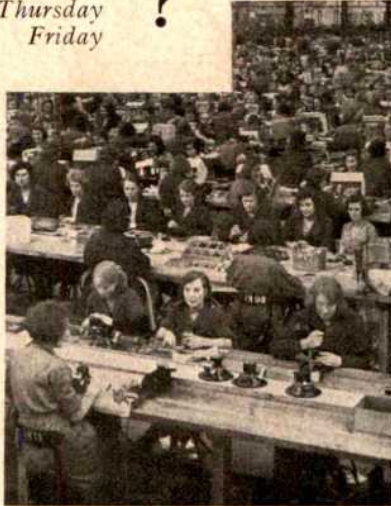
SALARIES

? Monday
Tuesday
Wednesday



. . . . WAGES

Wednesday
Thursday
Friday



Business Morality, They Say it's Slipping!

FOR years early twentieth century pundits alleged a steady decline in business morality. The viciously increased tempo of modern business they cited as the cause.

The tempo of business up till twenty years ago, however, was veritable stagnation compared with the erratic scramble which a world hysteria has thrust on business in the last five years.

To-day, therefore, there are others besides mere pundits who maintain that business ethics have slipped a notch or two from their previous high level.

Well, whatever foundation (if any) there may be for that assertion, the present moment certainly lacks no reasons for business men to be, as it were, a little quicker on the trigger.

Take contracts; that seems the point on which this morality is most critically challenged.

But how can you stick by a business contract, binding you to many conditions and for a period ahead, when 48

hours may see your factory smacked around till it looks like a rubbish tip?

That, of course, sounds a pretty good alibi, and no doubt a few consciences are finding in it sufficient self-justification for this and that.

One does not, however, have to visualize the extreme exigency of war in order to appreciate that, to-day conditions might impose a bit of a strain on the business moral fibres if contracts are not framed with an accommodating resilience.

Look at the factors over which the average business man has no control whatever, but which at a moment's notice might impinge on the conditions of any contract.

Suddenly, for example, Government priority might cut a manufacturer short of raw material. What, then, happens to his promised deliveries? What happens later, too, to his prices when, through shortage, he has to pay more for what raw material he can get, and

his production costs get shot full of holes?

Government priority again might command him to switch over from normal product-making to armaments. And once more he comes up against it.

Just by way of variation, wages of his workpeople may be arbitrarily raised. A labour exodus to other centres may jeopardize his output. Panic buying by foreign authorities may drain his raw material sources.

When, therefore, a business man gets to stretching a point or two of a contract—perhaps even to the extent of putting a bit of a tax on his customer's or supplier's credulity—it does not necessarily indicate that he is back-sliding. No man can do that which he is absolutely prevented from doing.

What this leads up to, therefore, is this: The wise business man must shift his point of view on the making of contracts. A whole lifetime of experience will not equip him with second sight:

will not enable him to foresee these adamant contingencies. His alternative, therefore, is to include in his contracts that element of resilience just referred to and to appreciate at the same time that any other parties must also be permitted the exercise of a similar latitude.

But even on this there are two points of view. An executive of one famous manufacturing concern said to us re-

cently: "Our contracts these days are shorter and virtually full of loopholes, and our solicitors know this and do not try to legislate against a whole index of calamities. Our business is becoming more and more a matter of mutual trust."

On the same subject the secretary of another company remarked: "Every contract we make we send first to our lawyers for vetting, in case some con-

tingency might have been left uncovered."

So there you are. Some business men confident in humanity's native integrity, and others coldly defensive against its potential wiles.

Personally we do not think there is any disintegration of business moral fibre. Fair play predominates as ever; there are a few catchy new rules: they want watching, that is all.

Quiz Sessions Help Employees To Learn

SPELLING BEES aroused enormous interest a while ago. That millions still regret their infrequency over the air shows that the "quizzing" interest is, in fact, still alive.

A well-known firm in the U.S. is turning this natural interest to good use by holding departmental general knowledge sessions. Executives and work-people mix without distinction. Each session comprises from 25 to 50 people, with a voted chairman.

Before the session each member is invited to send three questions to the chairman, who then makes up from these a special questionnaire.

All questions are framed with the idea of producing information valuable to employees.

The firm's executives report that the scheme is extremely successful because it works two ways—employees dig up information about merchandise on which to base questions, and they dig up information on which to answer questions.

A method is now being sought whereby inter-departmental quizzing contests can be held. At present the sponsors cannot get over the difficulty that each department specializes in particular knowledge. But if big enough lists of questions general to the business can be framed the battle will be on.

It is a worth-while employee stimulus and education scheme that any firm can adopt.

its products, alertness, friendliness, and enthusiasm.

It goes without saying that a guide candidate must be presentable, have a clear voice and good diction. Special training is given to those selected as guides to prepare them for the job.

The company sales executives, in studying factors for handling visitors most successfully, have laid down these principles:

1. Safety is paramount.
2. Itineraries must be arranged with the visitors' comfort and convenience in mind.
3. Trips must be classified to suit the respective interests of the various types of visitors.
4. Trips must "mean something." Both itineraries and scripts must be laid out to give the visitor an orderly conception of what he has seen.
5. Some means must be devised for the guide to be able to explain the various manufacturing steps to *every-one* in the party.

One of the guides employed to conduct visitors through the factory built a crude, but ingenious, portable speech amplifier, powered by dry batteries which he carried along on his trips with visitors. It proved so valuable that an electrical company was commissioned to build a portable voice amplifier to these specifications: Not more than 5 lb. of weight on each hip, nor more than 15 lb. total; voice to be broadcast on a directional basis, so as to offer no undue annoyance to workers; variable volume control.

Last year "Caterpillar" entertained 14,500 visitors from every corner of the world.

Business Turns to Mutual Aid Pacts

A COMMON danger always has the effect of drawing people together for mutual aid. One of the results we see, therefore, is the keenest competitors in business pooling their assets and resources for common action and protection in case of emergency.

The Indestructible Paint Co., Ltd., for example, have entered into a pact with other well-known paint firms with the object of collectively ensuring that each company will be able to carry on its business with the minimum of interruption in the event of damage by war.

We have not yet details of this pact, but in principle it is obviously a thing which manufacturers in every sphere should seriously consider.

While the benefit of such an arrangement to individual companies is clear enough, the benefit to the country of a widespread application of the idea would be beyond price. It is not too much to say that, in the event of protracted hostilities, it is the maintenance of a fully functioning business structure, even more than armed forces, that would guarantee the nation's survival.

Factory Guides Use Portable Amplifiers for Visitor Talks

ONE of the best means of fostering "public relations" is to have the public visit your factory. More and more firms are adopting this policy of "open house."

In this connection the following note from our friends on the other side, *American Business*, will probably interest you:

Under the policy of welcoming all visitors to the factory, Caterpillar Tractor Company has made a special study of improved methods for guiding visi-

tors through the factory so that they will come away with a definite impression and an intelligent understanding of the plant, instead of a confused feeling that they have seen a lot of busy machinery.

One of the main considerations in handling visitors to a factory is the need for competent, presentable guides. Caterpillar adheres to the following qualifications in selecting guides for its tours: Considerable service in the factory, knowledge of the company and

Now's the Time for a Bit of Goodwill-Building

IS not now just about the time to think a bit more of cementing existing customers to us than of putting on the high pressure to get new ones?

True, every manufacturer wants to expand his sales volume. In fact, in other paragraphs of this issue we have urged this expansion and development. But in these times the loyal customers on the books may well prove to be more than ever the life-blood of a business.

The board of one well-known company has ordered the issue of a series of "personal" letters to all its retail distributors. These letters are nothing to do with direct order-getting. They are just friendly notes, thanking the retailer for his support in the past and commenting on the present and the

future. Each letter is signed by the managing director.

These letters are goodwill-builders.

Boom times—even normal times—see too much of the grab-without-comment

type of business. "Thank you" is one of the most powerful expressions for good in any language. Enough use is not made of it.

The time is ripe, however, for its

effect to be of even more than ordinary value. There are many ways of saying it. Try one. Not as a small-time perfunctory shot but as a management gesture on a big scale.

Spotting Those Customers who Begin to Cool Off

COSTS of production may be reduced to the bone and output increased to the maximum, but unless the goods are sold in increasing quantities the works manager's cost-cutting enterprise will lose much of its effect.

There are a great many ways of keeping sales records, but one of the simplest is the use of the Moving Annual Total method. This can provide a clear picture of the *trend* of sales made to each individual customer and into each territory.

Seasonal Fluctuations Destroy Fair Comparisons

When examining sales by individual months, seasonal fluctuations always distort the comparison. One must compare the figures for the month in question with those for the corresponding month of the previous year, and one accumulates a number of increases and decreases, which can be eliminated by the use of the trend or Moving Annual Total.

If, say, £10,000 worth of goods were supplied to a certain customer, town, or territory during a certain year, we must ensure that we not only maintain that volume of sales but increase it. If we are to do this we must first convert our sales records into moving annual totals.

The table given here will show that sales control is made more effective by the use of the moving annual total.

If the sales manager has his figures prepared in this manner he can see at a glance where the weak spots are and can tackle them at once.

Total Sales (Area A): The trend of sales is rising as a whole, but the question is "which customers are buying less of our goods?" The sales manager then gets busy examining each customer's trend record individually. His task is made easier in that the customers whose trend of purchases is falling can be easily seen. To make these cases still more apparent the figures denoting a fall in trend could be typed or marked in red.

A. B. & Co.: Sales were £165 in May 1939, and the figure for the year to May 1939 was £292, which is a big improvement on £175 for the year ending April, although there is still leeway to be made up if the total for the financial year is to be maintained.

C. D. & Co.: Only £22 for May has pulled the trend down to £424, against

There's a simple and quick-action way to do it. The method described here keeps a finger on each customer-pulse

	Month of May 1939	Twelve Months Ended		
		May 1939	April 1939	Financial year March 1939, for comparison
	£	£	£	£
Total Sales (Area A)	5,091	65,118	64,735	63,093
A. B. & Co.	165	292	175	331
C. D. & Co.	22	424	492	395
E. F. & Co.	102	502	583	649
G. H. & Co.	278	3,200	2,977	2,900
etc.				

These figures are fully explained in the text

By E. D. P. HARDY, F.I.I.A.

£492 for the year to April, but the trend is still a little above the financial year total.

E. F. & Co.: Here the trend is falling steadily and calls for special attention by the sales manager.

G. H. & Co.: Sales trend is rising steadily, and no action is necessary.

Perhaps the easiest way to keep these

records is to use visible index cards with signals. The M.A.T.s can be worked out speedily by a high-speed adding calculator, and, when all the moving annual totals have been entered, the cards on which a fall in trend is signalled can either be extracted and given to the sales manager or they can be looked over *in situ*.

Through the proper use of signals the sales manager can see at a glance (1) the month when the customer last bought, (2) for how many months the trend has fallen, and, in fact, any information shown on the card can be signalled on the visible index strip.

Wanted: More Optimism Like This

"We deprecate very strongly indeed the increasing tendency amongst traders and the buying public to defer their commitments because of the international situation. The effect of that attitude in this matter has already caused a serious slowing down in trade generally, and if it continues it will almost result in a complete paralysis of business.

"We cannot imagine a greater disservice to the country or one better calculated to play into the hands of a possible enemy. For this reason, we ourselves are going ahead with every scheme we had in hand and hope thereby to set an example by embarking upon new enterprises just as we should do in normal times."

V. E. Vincent,
Managing Director, Bovis, Ltd.

Modern Methods Pay For Themselves

There are many old-fashioned firms who begrudge the alleged expense of keeping modern sales records. They prefer to continue with their old-fashioned hit-or-miss methods, without having any real control over their sales, whereas by a comparatively small expenditure in the way of cards and clerical wages, they can provide themselves with an absolute X-ray of their sales activities. If they have the means of spotting immediately the trend of a customer's purchases to fall, this fall can then be arrested by special attention to that account. The money invested in such a record system pays a handsome dividend.

These 4 Sales Policies . . .

Established 15 New Lines in 11 Years

ELEVEN years ago, Mr. S. A. Scoffin, finding the price of garden rollers relatively high, made one for his own use by filling a sheet-metal drum with concrete. He logically concluded that many other people would be just as interested in a cheap roller, and began making them in his spare time.

To-day, this "inventor" is managing director of Scoffin & Willmott, of Ironcrete Works, Barking—a business that last year produced, with its garden rollers, no less than 15 lines; whose turnover is expanding at the rate of 25 per cent per year; and which distributes through many more than 4,000 retailers.

Mr. Scoffin's success is due to the four broad policies outlined at the heading of this article. His first product is a good example of policy No. 1. It was a roller consisting of a steel cylinder filled with concrete; it was new, it was different, and it was every bit as effective as the much higher-priced rollers then on the market.

This Basic Factor is Too Often Overlooked

The policy of novelty and increased usefulness Mr. Scoffin has faithfully followed. The rapid success of his first line did not blind him to the fact that there was a fundamental reason for its eager reception by the public. He realized that each new line introduced must have similar clear-cut sales points or features which enable it to make strong appeal to the public.

That is a truism; nevertheless, such an obvious and fundamental point is often overlooked. Some manufacturers rush into a new market with "unpolished" products and certainly seem to prosper for a while, until the first steep demand slows down. Then more progressive competitors who have made their particular product "different" in a number of ways, in both small and large points, forge ahead, leaving the unimaginative manufacturer probably heading for disaster.

The success of the additional lines which from time to time have been added has been largely due to this policy of being "different."

When it was decided to produce galvanized garden wheelbarrows, for example, ball-bearing wheels were decided upon for utility; here again was a novel sales feature. Further, with existing barrows it was impossible to carry a full load without spilling the contents over the front of the body, simply because of the angle at which they had to be wheeled. The new Ironcrete barrow eliminated this drawback; it had upswept handles and spill-

1. Making all new products have novelty appeal and definite advantages over competitive lines
2. Introducing new lines to expand market and keep all machinery fully employed
3. Constant improvement of every existing line
4. Definite plan to control, assist and "service" Retail Outlets



From S. A. SCOFFIN, Managing Director, Scoffin and Willmott Ltd.

garden ornaments, barrows, etc., came to be added.

Considering these lines were all seasonal, additional lines having different sales periods were then introduced so that factory output over the year could be better balanced. For example, coal bunkers were decided upon because the demand for them occurs in the winter, against the summer demand for garden implements.

Great as was this advantage of balancing output, however, it was equally important to ensure that new lines could be made by utilizing existing machinery. Thus, steel coal bunkers and steel meat-safes are manufactured on the same type machinery, and designed on the same principle. Similarly, the same presses which produce barrow bodies are also used for the production of disc wheels, coal bunkers, meat-safes, bathroom scales, etc.

No Product Allowed to Rest On Its Laurels

The Ironcrete policy never permits of standing still once a product has been launched. For instance, although substantial sales were made with the barrows, it was subsequently decided that a pressed steel disc wheel offered still greater strength. So the barrows were made with disc wheels manufactured in the Ironcrete Works—and sales mounted. Again, too, other manufacturers soon followed suit, but the Ironcrete barrow had got the market.

In making alterations to products, the firm have always been guided, too, by any implication to be deduced from sales figures. For example, the original roller was made in one piece instead of twin halves, the form with which we are all familiar nowadays. This feature, it was found, definitely hindered sales in certain areas. Although there were production difficulties in the way of marketing an Ironcrete roller of two rotating sections, the technical problems were attacked until an economical process of manufacture was found. Sales of the improved roller rose steeply.

Apart from new lines having better

ing was therefore impossible. It is interesting and significant that practically all barrow manufacturers have followed suit to-day.

In introducing galvanized steel coal bunkers, too, unique features were incorporated. The Ironcrete bunker was the first to be designed on the unit principle, which made it, incidentally, eminently suitable for mass-production. Instead of the usual sliding door, a wide drop door was designed which facilitated the shovelling of the coal from the bunker and at the same time prevented the contents falling out.

Additional Lines Selected to Suit Existing Machinery

These, and the other Ironcrete products, were introduced to satisfy the primary need of every firm—expansion. Just as the features of a new line must be planned, however, so must the nature of new lines be carefully considered. In the earlier stages of this firm's development certain lines were, naturally, complementary to the main product, the garden roller. Thus,

features and being continually improved, they have always been tested under the severest working conditions. When the barrow was introduced, a model was packed with a heavy load and towed behind a car up and down a by-pass road for many miles.

Working conditions in the factory also provide a practical testing-ground for the industrial equipment lately introduced, whilst the female staff take a hand in deciding points regarding domestic lines.

The industrial trolleys, first made two years ago, have, for example, been used for months in the Ironcrete Works, whilst the domestic line, bathroom scales, owe their standard colours to the votes of the female staff and their women friends.

It is interesting to note that the popularity of colours chosen in this way was subsequently confirmed by the retailers' own experiences.

Such comprehensive planning and testing of each new product assures favourable reception by the public and the retailers. To support the sales of new lines, national and other advertising is invariably undertaken.

Novelty a Feature of Publicity Matter, too

Use is also made of brochures which are circulated to all established retailers. An important point is that, realizing the use of brochures is now commonplace in most campaigns, this part of the campaign is made undeniably more effective by issuing brochures which include some striking and original feature of presentation.

The brochure announcing the bathroom scales, for example, was made with a slit in the cover in which was tucked a personal card from Mr. Scoffin. A strip attached to the back was arranged so that, in unfolding the brochure, the dial of the bathroom scales depicted on the two inner pages

appeared to move and register a weight. In effect, novelty was used again, as it was in actually making the product, to arouse interest.

When Mr. Scoffin first started to sell the original product, the roller, he had, of course, to be content with small

"At the beginning of this year we budgeted for 1939 to be our biggest year yet. Our optimism has not proved unsound. We are going ahead, and are still following our policy of plant and premises expansion to meet the growing volume of our business."

J. BEHARRELL,

Managing Director,

Hawker & Botwood, Ltd.;

Director and General Manager, British Feeding Meals and Milk Products, Ltd.

advertisements in the national papers and in local papers. As sales increased, however, and more capital became available, the advertising appropriations were increased. Demands from both the public and retailers were being met, but the volume became such that in 1929 the present distribution policy was decided upon—to supply Ironcrete products only through retailers.

To compensate for the elimination of orders *direct* from the public, retailers had to be given service. At the same time, they had to be discreetly controlled so that their active co-operation would be ensured.

These, therefore, were and are the points of his retailer policy: (1) Fixed prices and discounts; (2) 48-hour delivery, if possible; (3) prompt satisfaction of all complaints; (4) retailers are advised monthly of their sales figures; (5) wholesalers are limited in number.

Fixed prices are rigidly adhered to, and price-cutting is therefore unknown. Accordingly, whether an Ironcrete product is purchased from the large store

or the smallest retailer, the price to the public is always the same. By this means the manufacturer and the retailer are satisfied with regard to their profit, whilst the customer receives a square deal.

In the case of large stores and wholesalers, contracts entered into contain a specific clause enforcing price-maintenance.

Retailers who disregard this injunction are first warned by a personal letter from Mr. Scoffin and then, if they still refuse to sell Ironcrete products at the fixed price, their supplies cease. The policy of the firm is so well known, however, that such cases are exceedingly rare. The firm's attitude is well known among all retailers, who consequently are more than eager to co-operate fully with a manufacturer making no discrimination between customer large and small.

Complaints regarding quality or bad delivery are rare.

Nevertheless, nothing is done which allows the goodwill established by a rigid price policy and prompt delivery service to be weakened.

All complaints are satisfied and legitimate demands for replacements met without question.

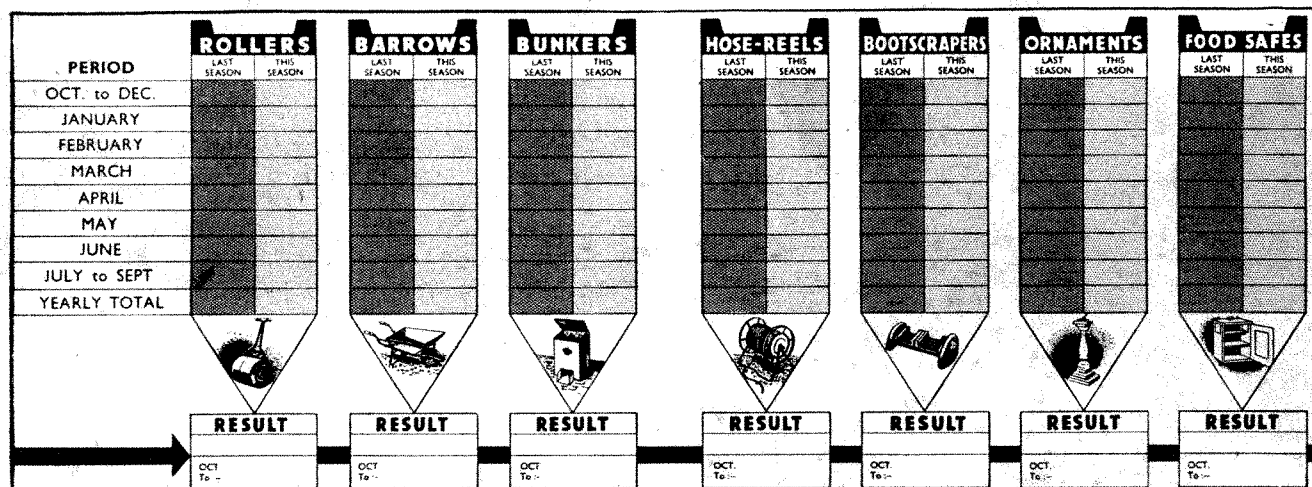
For example, if a retailer receives a product in a damaged condition, the policy of the firm is immediately to replace it and not to enter into a long and involved correspondence to the annoyance of the customer.

Office Statistics Used to Help the Retailers

Then use of office statistics is made to provide a service for retailers. In the ironmongery trade they have to sell over 4,000 items, and it is difficult to keep track of sales of individual lines. The Ironcrete staff make an extract of the office records in respect of each retailer and forward it monthly. Thus, each important customer receives a

(Continued on page 46)

These Special Record Cards are a Double Help . . .



... they help the retailer by showing him, monthly, just how he stands in regard to his sale of each Ironcrete line. Also they help the manufacturer who, seeing each record card before it goes out, can assess the condition of each account, and advise his salesmen accordingly

"TAKE COVER" . . . and in 7 Minutes 3,000 Staff are Safe Underground

THE training of employees in evacuation routine is a vital factor in any scheme of industrial A.R.P.

The finest air-raid shelters in the world are of no value whatever unless staff can reach and enter them within the "safety" time limit allowed between the warning of enemy aircrafts' approach and the dropping of their first bombs.

There's this Advantage Over Casual Crowds

The massing of people within a small area naturally presents a difficult problem, but in several respects firms are fortunate. The regularity of attendance enables staffs to be drilled and instructed in a way that would not be possible with, say, cinema audiences or casual crowds at shopping centres or railway stations.

It is, moreover, possible to maintain standing orders in normal times (with occasional practices) that can be put into immediate operation in the event of emergency. Naturally, the exact nature of these standing orders depends upon the type of organization to which they are related. Offices may differ fundamentally in their routine from factory assembly bays. And multi-story buildings, for example, will almost certainly require an approach distinct from that of open single- or double-floor blocks.

But all schemes will have a great deal in common insofar as they apply to the personnel more than to the building to be evacuated or to the actual shelter accommodation. The following details, therefore, of the

but at E. K. COLE, LTD . . .

Bolt holes are only part of the scheme : Organization and Training are shaping the staff into a well-drilled COMPLETE A.R.P. UNIT



A practice turn-out ; some of the 3,000 going to earth

organization prepared by E. K. Cole, Ltd., the Southend-on-Sea radio manufacturers, may be of value and information to others contemplating similar A.R.P. work.

Dealing first with general organization, the existing fire and first-aid services at Ekco works have been absorbed by, and are being developed as part of, an emergency organization. This is designed to cover peace-time as well as war-time contingencies. Additional emergency sections, each with its own planning organizer, have been added.

HELP

For Your Own A.R.P.

A.R.P. measures demand thought and planning. Many firms are not able to investigate fully the problems involved, but adequate protection to staff **MUST** be provided.

E. K. Cole, Ltd., well-known manufacturers of radio, have provided shelters for their 3,000 employees. In so doing they have closely investigated all A.R.P. problems and have gained much experience in the work.

As a contribution to National Service, Ekco offer, free, to other firms detailed information and plans of the work they have done. This information will be published in "Business" in three articles covering:

- (1) Staff Organizing and Training
- (2) Shelter Construction
- (3) Shelter Lighting

The first of these articles appears on this page. The other two will appear in subsequent issues.

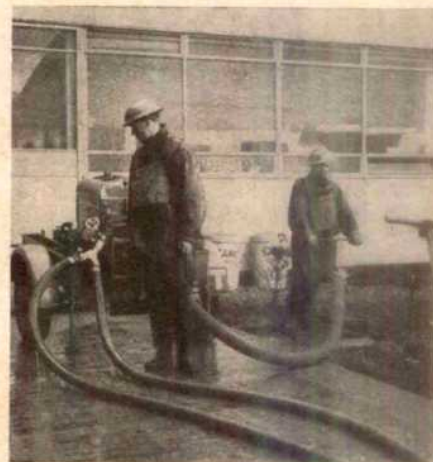
The complete schedule of sections is :

1. Evacuation of personnel from all buildings and allocation of shelter space.
2. Fire Brigade and Salvage organization.
3. First-aid, including stretcher-bearing parties, etc.
4. Decontamination, including buildings and personnel.
5. General Planning and Co-ordination of emergency sections (including liaison with outside organizations).
6. Product Protection.
7. Records Protection.
8. Services Protection and Restoration.
9. Emergency Equipment Storage and Maintenance.

The emergency organization is based on broad principles. These, although designed primarily for a "light" factory and its accompanying offices, might require only small modification



Shelters are divided into many short galleries—the corners for "breaking-up" possible effect of blast. Map on the cupboard shows the lay-out ; in the corner of each rectangle is a station equipped as shown (sanitary accommodation in bays to right of telephones)



Members of the staff are trained in Auxiliary Fire Service, and are here at drill with an official-type trailer pump

to suit almost all circumstances.

In normal times it is essential for planning and practices to be carried out with a minimum of disturbance to routine. In emergency all must take their share of responsibility and their part in the plans. *Hence duties have been allocated as far as possible where they will fit most closely into normal work.*

Decentralization and wide delega-



In addition to First Aid posts at the corner of each gallery (28 in all), there are two main First Aid bays, with trained staff nurses. Electric heaters are fitted, and provision is made for hot and cold water supplies

tion of duties are the recognized keynote for A.R.P. The entire personnel, therefore, of E. K. Cole, Ltd., has been divided into groups of not more than 30. Each is under the control of a Group Leader. He is chosen for his initiative and self-reliance and is, where necessary, responsible to an appointed Emergency Organizer.

Emergency Organizers are executives. They plan the work of their own sections in accordance with management policy, but they are expected in emergency to act on their own initiative as circumstances dictate.

Individuals are reached through the Group Leaders, who are supplied with forms listing the group members. These forms must be kept up to date and must be submitted regularly for checking to the Employment Records Dept. They also contain these instructions to Group Leaders:

1. Know each one in your group by sight and see that they know you as their Group Leader.
2. Ensure that each one always has an individual instruction sheet properly filled in.
3. See that your Group know their appointed way out (and alternative way) in case of fire.
4. See that they all know their positions in the air raid shelter and the right entrance.
5. In time of war (or when notification of practice is given) see that each one has coat and gas mask handy.
6. A deputy to act in your absence has been appointed—see that your group know of this.

In case of fire lead your group out by Exit No. — (or failing this by Exit No. —). Your deputy will leave last in your group. Assemble on central roadway and take roll-call.

In case of air raid lead your group

out by exit as above and proceed to shelter entrance —. Assemble for roll-call in gallery —.

When the "all clear" is sounded guide your group back to normal working conditions, or as otherwise instructed by Emergency Organizers.

Provision is made on the back of this form for individuals to sign, indicating that they have received their instruction sheets and understand the contents.

Individual instruction sheets give the name of the appointed Group Leader and details of the exits, routes and shelters to be used. Employees are also instructed, in the event of emergency, to keep coats and gas masks at their benches or desks and to carry them when evacuation is in progress. Provision is made for this procedure to be followed by employees temporarily away from their sections when an alarm occurs. In this event they are to follow the nearest group from the building but to enter the shelters by the correct entrance.

Instruction is: 'Down Tools' and 'Down Work'

All employees are instructed to leave their work on desk or bench. This is a standing rule unless special instructions have been given previously for its removal elsewhere by the organizers responsible for Product and Records Protection.

These emergency arrangements are intended to apply to the main bulk of employees. They are entirely distinct from those applicable to employees required for special duties in the various emergency sections. These are naturally kept to the smallest suitable number and, in most cases, they are individually instructed and trained in co-operation with local A.R.P. organizations.

In the event of an air raid the warning signal from the civil authorities would be received by telephone on two separate lines in points at which there are duplicate controls for sounding the

alarm. All plant and power would be closed down immediately. Fire, first-aid and Decontamination sections would take up their positions in individual and special shelters. Evacuation would proceed on the lines described.

Periodical practices take place. Their value is demonstrated by the fact that 3,000 employees, gathered



Some form of diversion during raids is considered essential for the prevention of panic, and dart-boards, cards, radio, etc., form part of the standard equipment

from the limits of a factory area of 300,000 square feet, can now be housed safely underground in less than seven minutes. In the original practices the time taken was nearly twenty minutes.

E. K. Cole, Ltd., are anxious to exchange information and news on the subject of industrial A.R.P. with other companies. They will welcome any similar co-operation that other firms may feel prepared to grant. Much expense and valuable time, it is felt, can be saved by "pooling" experiences in this way.

This Protection is Valuable in Peace as Well as in War

A.R.P. must include protection of documents, records, files, books, etc., that are vital to your business. In many cases, however, methods of protection have peace-time value. The risk of fire, for example, is a danger which persists always. Any office safe, therefore, should in the ordinary way provide protection of this type.

There are a number of safes on the market which give the necessary fire and other protection. For instance, Milners' safes resist a girder falling from a great height. They can also withstand being buried under tons of burning debris for days. Under such disastrous conditions their contents remain undamaged.

The company, incidentally, makes other equipment useful for A.R.P. purposes. The Vee-Bar strong-room is an example. This is one of the most efficient and least expensive forms of reinforcement for concrete strong-rooms. It can be embodied in the structure of a building or erected in that of an existing room. This type of strong-room is usually built without foundations, straight from a prepared floor.

Protection against gas and bomb splinters requires special doors to some shelters. Milners' have produced doors of mild steel. These are gas, blast and splinter proof. Fixed to an A.R.P. shelter, the doors provide protection against the dangers mentioned.

Equipping the Fire Squad . . .

Vital Unit in Your A.R.P. Scheme

FIRE-FIGHTING squads will compose one of the most important sections of factory A.R.P. organization should war come. Fire fighters may, indeed, frequently be key men in saving lives and property, because there will be wide scale use of incendiary bombs.

Training of fire-fighting squads should be started at once by all firms. Even if you have a good factory fire brigade now, that is not sufficient to meet A.R.P. demands. New squads, supported by adequate reserves of trained men, must be formed. It will be too late to start this work in a crisis, just as it will be too late to commence shelter construction at such a time.

Cash Savings Effected Through Fire Service

Adding to your fire protection service has compensations. To offset costs in money and time there are these advantages: (a) you will be much better safeguarded if a normal fire should break out; (b) the formation of extra fire-fighting squads and the use of new equipment means you will pay less for fire insurance premiums; (c) the team spirit encouraged by the voluntary service will be of benefit to the firm as well as to the staff.

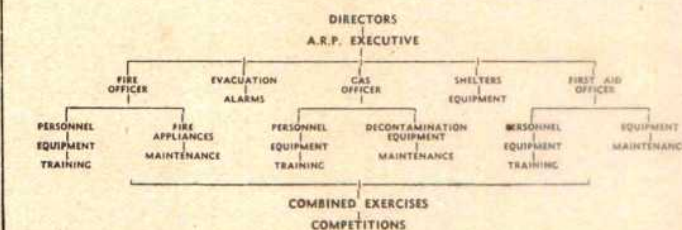
One of the most important considerations now is: what new equipment is needed? Much depends, of course, on present equipment and the location of your factory and business premises. Obviously, a factory situated in a vulnerable area which is certain to be attacked in war needs a maximum amount of equipment and personnel. Similarly, a works which is located away from vital centres can be protected adequately with little expansion to the present fire-fighting plans. Then, too, the type of building, nature of production, type of neighbouring buildings and so on influence the solving of this problem.

Executives Should Consult Local Fire Authorities

It is, of course, impossible to generalize. Each firm must get authoritative

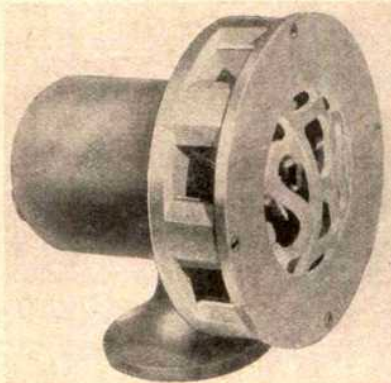
Here is a useful chart: it originates from Beat-ties, well-known fire appliance suppliers of Southgate

FACTORY A.R.P. ORGANISATION



ruling on organization and equipment needed. In most cases the chiefs of the local A.R.P. organization and the head of the local fire brigade will willingly give advice.

So far as equipment is concerned, manufacturers of fire-fighting appliances have been studying the A.R.P. problems faced by firms. They have produced a large range of equipment which will be needed. Here, in alphabetical



Small alarm syren with a big voice; the 'Junior' model (1/6 H.P.) by Service Electric Co., Ltd.

order, are listed some of the chief items which will be wanted by most firms with factories in industrial and vulnerable areas:

Asbestos equipment, including blankets in metal containers and haversacks, clothing, gloves, etc.

Axes, firemen's standard types, insulated and felling axes.

Boots, Wellington rubber and leather types, firemen's boots, etc.

Buckets, various types, for sand or water.

Belts, with axe, pouch and lifeline.

Branchpipes of standard type, stream form, hand controlled, poudorous diffusers and similar types.

Couplings, instantaneous type and various others.

Clothing of waterproof oilskins, jackets, leggings, etc.

Connectors and converters of all types for canvas hose.

Carts for hose and fittings.

Engines (soda-acid or foam) vertical, horizontal or trailer.

Extinguishers, soda-acid, foam and so on. First-aid cases capable of dealing with all types of casualties resulting from fire and explosion.

Gas masks, of approved patterns for active fire service.

Gloves, including rubber tested to 5,000 volts.

Hose, ordinary canvas, canvas rubber lined, India-rubber, non-kink, suction, etc.

Helmets of approved A.R.P. pattern.

Lamps, from electric hand lamps to fire searchlights.

Ladders, of approved fire-fighting types.

Stirrups pumps, single and double nozzles, etc.

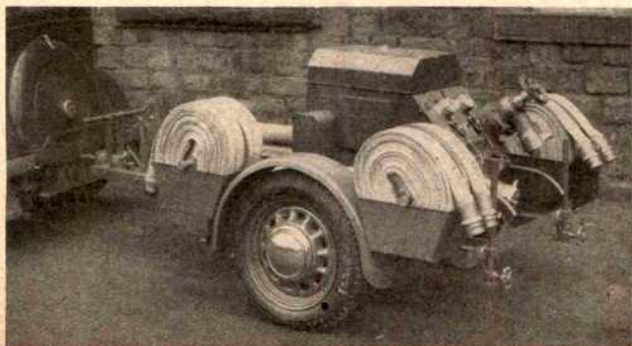
Other equipment includes saws, stretchers, standpipes, pouches, woolen blankets, sand container sets, and so on. Not all this equipment will be needed by every firm, of course, but doubtlessly a big proportion of it will be required by most firms with factories.

The leading fire appliance manufacturers sell the ranges of goods mentioned. There are, too, many models of each kind of appliance. It is up to each firm to select the type of equipment which is most suited to their requirements.

These Fire Pumps Deal With Incendiary Bombs

Let us examine briefly one or two essential appliances. Extra fire pumps.

(Continued on page 42)



One of Nuswift's latest trailer power pumps. Note how it can be taken in tow by a private car. This model, of high capacity and plenteous equipment, is extremely compact

Test Centre Steps-Up Sales of Kitchen Products

SEVERAL manufacturers of domestic appliances have recently increased sales by making their products suitable for kitchens planned on factory efficiency production principles. This modification of products is part of a scheme to co-ordinate the marketing of domestic appliances. It is operated by the Kitchen Planning Centre, co-operating with manufacturers.

This is how the scheme works. The manufacturer submits his product to test, the cost being shared by mutual agreement. A confidential report is then made to show how the product should be modified to suit a planned kitchen. Approved appliances are then recommended by the Centre in each "planned kitchen" issued. As a "hall-mark" further to help increase sales, firms attach to their products the Centre's red and white seal of approval.

Over 4,000 architects, builders, local councils, etc., are now regularly contacted by the Centre. An approved manufacturer is recommended to all these. The Centre's traveller also gives his name to the 1,800 new contacts made each year. Approved products are also recommended specifically in the booklets given to housewives. (In the past two months over 1,200 women have attended the Centre's lectures,

arranged through gas and electric companies, women's clubs and institutions, etc.)

A manufacturer may ask: "Why should I accept the standards of the Centre?" The answer is found in the success of the Centre's researches. They began with mere rearrangement of the normal kitchen fittings. This reduced the housewife's work by half.

To-day 60 out of every 100 active local authorities take recommendations from the Centre. It has issued 9,000 plans of specific kitchens, many for builders each erecting hundreds of houses. Firms recommended have gained thousands of pounds' worth of business through these channels.

Each appliance tested is used under ordinary working conditions in a normal kitchen for days, sometimes months. Suitability is determined by its "behaviour." A wringer, for example, may need fitting with clamps for use on the side of a sink; a boiler may need to be square to fit conveniently alongside the wringer.

Manufacturers who modify their products receive free technical advice on production problems. Any firm interested in this scheme should write to Kitchen Planning Centre, 2 Old Bond Street, London, W.1.

Output Up, as Noise goes Down

IT should almost stand without proof that noise in offices and factories is definitely injurious to the health and morale of the workers. Under noisy conditions their accuracy and output are measurably decreased.

A few years ago tests were made of typists' efficiency under 50 decibels of noise and again under 35 decibels. It was discovered, in general, that the typists consumed approximately 19 per cent more energy in a noisy room.

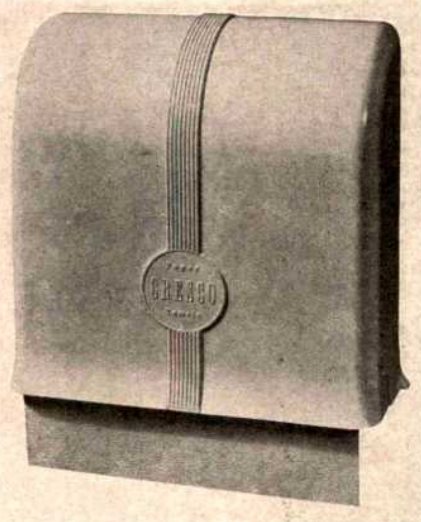
Their productivity improved about 5 per cent in the quiet room. In another instance, laboratory tests revealed that when a complex noise was reduced from 50 to 40 decibels there was a 30 per cent increase in the speed of persons multiplying three-place numbers by three-place numbers.

When the assembly department of a temperature regulator company was moved from next to a noisy boiler shop to a quiet location, rejections were reduced from 75 per cent to 7 per cent; average output rose from 80 to 110 units. In another department, removing the noise of a ventilating fan increased production 12 per cent.

Noise can be eliminated or minimized in most places where it is economical to do so. The best method is the direct one of cutting down vibration or eliminating the noise at its source,

such as using noiseless typewriters, quiet fans, quiet motors.

Another means of quieting is to isolate noisy machines or other types of



This bakelite container is supplied free to users of Cresco absorbent paper towels. Their use eliminates spreading of infection, a danger with roller-towels. It is also claimed that supplies cost less than that of changing textile towels as often as is hygienically necessary

noise producers in a particular area. Sound-insulating partitions can be used to exclude the noises from other workers. Still another indirect method of quieting is the use of sound-absorbent materials, which can decrease loudness from 30 to 70 per cent. Even carpets will absorb about 30 to 40 per cent of the sound that strikes them.

In some types of noisy work the most practical means of lessening some of the ill-effects of noise is the direct insertion in the ear of noise deflectors. These are made of plastic materials or various kinds of rubber. Some deflectors, however, are harmful, and in many cases the best protection will be afforded by plugging the ears with cotton and vaseline.

(By Robert Lindahl and Dr. Carey P. McCord. *Industrial Medicine*.)

This New Welfare Idea Should prove Popular

HERE is a new kind of industrial welfare. Morris-Commercial Cars, Ltd., have organized an employment bureau for the benefit of the men who drive the vehicles it manufactures.

This is one of the many free services offered to members of a Drivers' Association formed by the company, and under the Association's own insurance scheme, for instance, the family of a member who is fatally injured while driving a Morris-Commercial vehicle receives £100, with an additional £10 for each child under 16.

Another scheme is to encourage careful driving and to promote road safety. An award, consisting of a Safety First Bar, is given to the member who has been accident-free for twelve months of membership.

It costs nothing to join the Association. All drivers and drivers' mates working on Morris-Commercial vehicles of any type are eligible for membership. A lapel badge and a wallet and notebook, containing hints on driving and legal information, are presented to each member on joining.

Owners and employers are invited to support the movement as far as possible.

Spare Parts for Those Foreign Machines

FROM the works director of a Coventry firm comes a hint that manufacturers using foreign-made machinery can well bear in mind: "We are at least doubling our stock of spare parts for certain Continental-made machines we are using," he said. "And we have recently had two young key men make a special study of the maintenance of these machines. These key men are passing their specialized information on to others of our maintenance staff. Spares would be impossible to get in the event of war, so we're not risking being caught out," he said.

THE TREND OF TRADE

Marketing—Advertising—Selling

Full Employment . . . By Christmas?

DESPITE political anxieties, the outlines of the business situation are now fairly clear. My predictions of coming prosperity for six months past seem to be justified.

Nothing short of war, not even another European crisis, can prevent this country reaching full employment in six or nine months' time: full employment that will be just as complete as our ingenuity in training, transporting and housing men where they are needed. That side of prosperity will be largely up to the business man and the local authorities.

Scund Recovery Depends on . . .

WHETHER this prosperity will be entirely healthy or not is quite another matter. Here finance and exchange factors will play a predominating part. The result depends largely on how skilfully the authorities control rates of interest, the direction of investment, of expenditure and the exchanges.

One way in which the situation is defining itself is purely statistical. Hitherto it has been impossible to tell what part rearmament was playing in the building, engineering, armament and textile industries.

Now the very poverty of our Government statistics has made this possible.* For nearly a year past the most widely accepted index of British prosperity has been completely useless. The Board of Trade Index of Production has moved upward with extreme languor. We now know that armament output is included in this index. By adding the estimated output of the number of workers engaged on armaments, it appears that rearmament is directly responsible for only about 10 per cent of our present output.

This is a comforting thought. Had the figure been 20 per cent, the business situation would have been unsound indeed, and a serious slump would have been inevitable in the end.

As it is, there is no serious cause for anxiety. Rearmament has simply kept up the sound revival in progress prior to the Austrian crisis. That crisis gave a minor slump the temporary appearance of a major collapse (between February and May of 1939 BUSINESS Activity Index lost nearly 20 points, the *Economist* index around 10 points).

Consumer Buying Speeding Up

AT last, however, the wages spent on armament work are beginning to speed up consumer industries all round. Clearly the reduction of 395,000 in un-



From CECIL CHISHOLM, M.A., Business Economist

employment this year is largely due to this cause.

Not merely the Yorkshire textile mills, many of them on half-time in March, are fully employed, but less obvious industries are also feeling the benefit. In the boot and shoe trade, for instance, unemployment fell from 10.9 per cent in December to 8.5 per cent in March; the heavy stocks of leather which damped the market last year are greatly reduced: the price of pelts and hides are rising.

The coal industries also are benefiting from the iron and steel boom. There is actually a shortage of certain classes of coal for immediate delivery. It looks as if the districts would be calling for higher quotas very soon.

Ideal Situation

VERY fortunately retail prices have fallen a little at the precise moment that commodity prices are hardening. This is the ideal situation for stimulating sales. It means that the foreign buyer has confidence, while the home buyer has more purchasing power in his purse.

Most of the other general industries record the steady upward surge of demand. Motor registrations were again up by 10 per cent in March; railway traffics show a steady reversal of their long decline; output of electricity was up by 10.7 per cent, as against March 1938; even retail sales were up 3.2 per cent on last year; despite the extremely bad weather at Easter.

Department Stores Under a Cloud?

ONCE again Central and West London proved an exception. Indeed, it looks as if department stores as a

whole, are under a cloud. They report a steady fall in sales since the autumn of 1937. Sales are now permanently back at the level prevailing in the spring of 1936. However, this only means about 5 per cent below the 1937 peak.

Comparing these figures with those of the fixed price stores and the multiples, surely it is clear that only the wealthy buyer is holding back and that the working classes have never spent more generously since the war boom.

Car output again made an all-time record in March. It remains to be seen how the new tax will affect the trade; my own opinion is that it will hit all save the high-power class, but not seriously. Meantime all the big makers are behindhand with deliveries of their small cars. Again, you may wait six months for your "eight."

Two Spots Not So Good

THE only two unfavourable factors in the picture are overseas trade and building. These figures also are extremely treacherous. True, exports fell in April to the lowest level since June 1938, although Easter fell in the same month both years; but there were five Sundays in this April. Yet the decline on last year was only 1.6 per cent. Considering that the fall has been 4.2 per cent since December the figure is not so bad.

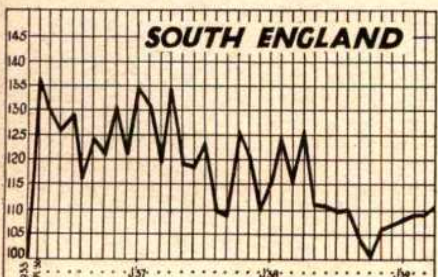
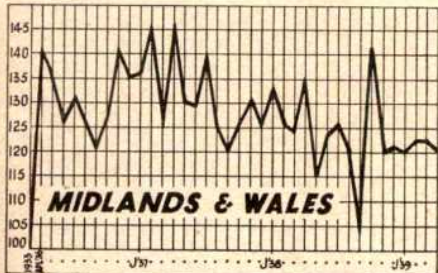
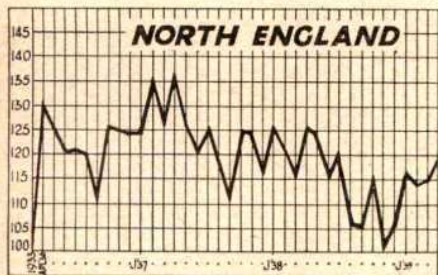
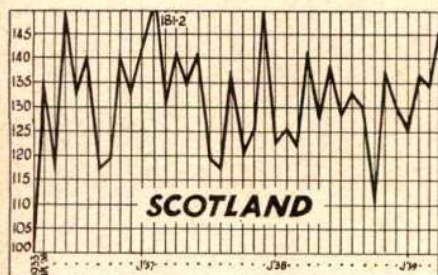
Failure to reduce the balance of trade is a more serious matter when the Government is financing on a £380,000,000 credit.

Building plans are down 8.5 per cent, after rising by about the same amount for two months, but this fall does not reverse the present trade. Fewer houses are being built in the South: more are being built in the North, but not enough to offset the falls elsewhere. On the

*Chart in the *Economist*, May 6, 1939.

REGIONAL ACTIVITY

Study these graphs. They show the level of business activity in every area of the U.K. and provide a guide to the trend of business from a long-term viewpoint.



other hand, Government orders for the national defence will more than make up for the fall in private housing. Indeed a shortage of skilled labour in certain areas is foreseen.

Government Building Won't Decline

CONSCRIPTION, the doubling of the Territorial Army, the continual expansion of aircraft and factory con-

struction, means that Government building will go on for at least another 18 months. The new Rolls Royce engine factory plan for Hillington is probably the most important advance in Scottish Industry development that has been seen for many years. A factory that will employ 12,000 men uses a lot of building labour and material.

Every industry in this country, outside textiles, is getting into full stride.

EMPLOYMENT INDICATOR TO TRADE ACTIVITY



IT HAPPENS IN YOUR BUSINESS (2)

**"TOMORROW WON'T DO—
I must know now!"**



"When was the order received?"
"When were the goods dispatched?"
Every day vital questions arise in every business which demand immediate, accurate answers. Valuable business may be lost, customers alienated, goodwill and prestige damaged, if uncertain guesses, delays and excuses replace knowledge of the precise facts.

When you require information urgently, how long is it before the facts are given to you? Do you have to wait while your clerks hunt and fumble through folders and bundles of paper? Or can you be

certain that the information will be in your hands in less than a minute? —as it would if you use Shannon Visible Records.

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tury's experience in planning efficient, profit-earning offices for organizations, large and small, in every line of business. Let us tell you how they can save you time, money and space. Please write or telephone for booklet offered below.

FREE! An indispensable text-book for the progressive office. "The Key to Hidden Facts" is a 16-page illustrated book, describing the endless possibilities of Shannon Visible Records in office and works. It will be sent Free to executives on receipt of business card or letter-heading. Write to-day.



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Even coal output is clearly going to rise considerably.

What Do These Figures Say?

UNDER these circumstances when can we hope to reach full employment? The question is crucial for two

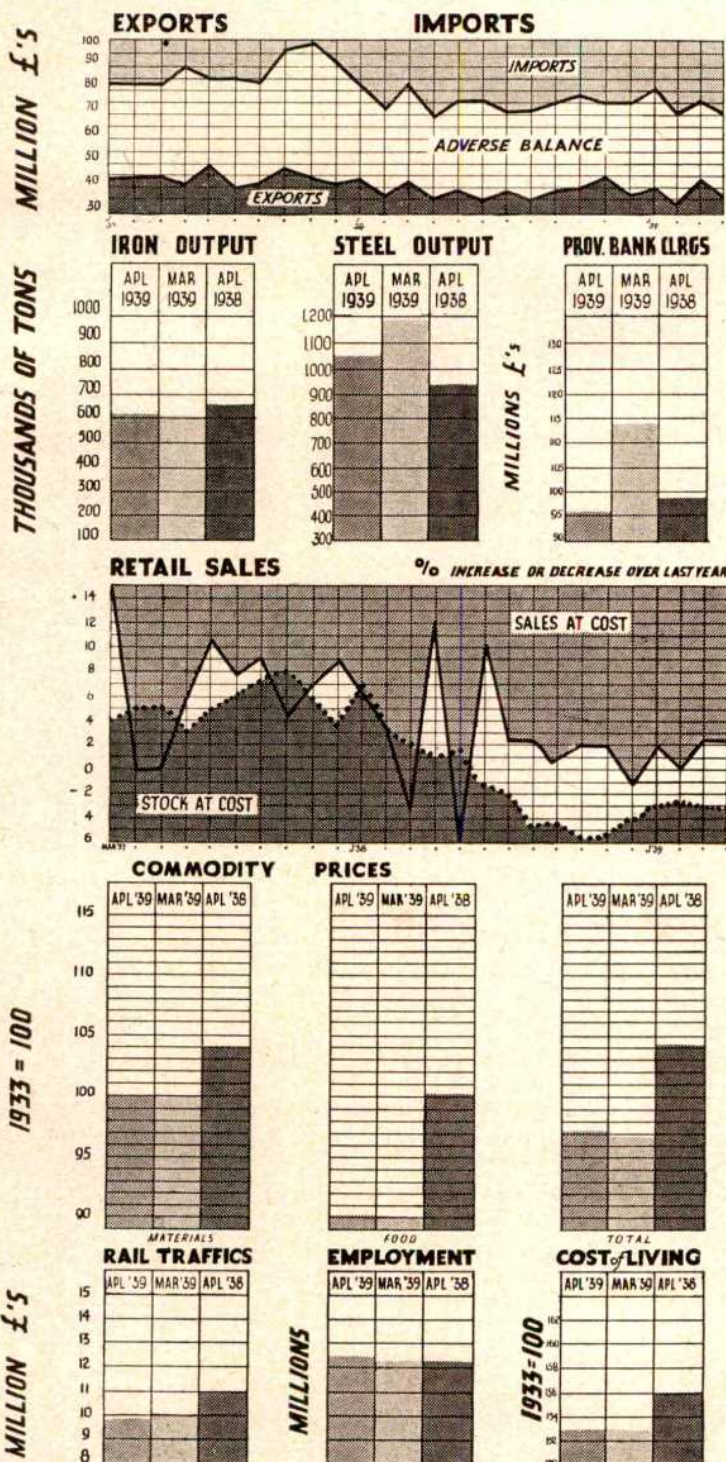
reasons. First because it gives us an idea of how far we have to go to reach peak prosperity; secondly because it warns us when we may look for changes in the present policy, e.g., dearer money, higher taxation, priority orders for armaments, and other restrictions. The number of unemployed in April

was 1,644,000. From this Sir Ronald Davidson informs us the following reductions must be made:

Normal and brief interruption in their jobs	...	500,000
Retired, but keeping persons alive	...	110,000
Unemployable (young men)	...	100,000
Unemployable (elderly men and women)	...	200,000
Increase in armed forces	...	200,000
		1,110,000
Fit workers to be absorbed	...	534,000

GUIDING FACTORS IN THE TREND—

All comparisons are with similar month in last and previous month in this year



We are left with just over half a million absorbable workers. Obviously the expenditure of an extra £380,000,000 on armaments should create work directly for a considerably larger number of people, quite apart from the facts of consumer demand. On the other hand, the unemployed weaver in Burnley may be unwilling or unable to take to work a semi-automatic in an armaments plant in Dumbartonshire. The ex-Welsh miner may not care to work at a Luton bench.

Danger of Bottle-necks

FURTHER, the danger of bottle-necks is already with us. At the moment there are only 16,500 people unemployed in the aircraft, motor and railways manufacture industries. Yet the total output of these people (measured by the 1935 Census of Production) would be only a quarter of the estimated additional demand for aircraft output this year—£45,000,000.

By this time next year the new Rolls Royce engine plant in the West of Scotland alone will require 12,000 additional workers.

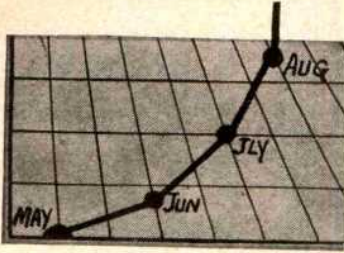
A similar position looms ahead in the arms and machinery manufacturing trades. Already the supply of machine tools is becoming difficult. In short, it looks as if a shortage of labour rather than one of equipment and machinery may begin to slow up output in 12 months' time. Most machinery will work two shifts instead of one: men cannot.

Material and Labour Shortage

IF this analysis is correct, several conclusions are inescapable. Business shortages both of material and labour are coming into sight on certain points: their number will rapidly increase.

It seems unlikely that the next Budget can be financed on another enormous deficit if we are near the full employment of our resources. The result would be disastrous. Therefore more direct and indirect taxation would seem to be inevitable next year.

Further, as raw materials become more scarce, the Government will clearly ration essential raw materials to private industry. The present increase on the horse-power tax on private cars is, I believe, a significant gesture from the Treasury.



How SYNCHRONISED RECORDING *keeps down rising costs*



However gratifying it may be to notice a satisfactory upward trend in the sales-graph, nevertheless expansion must cause you to watch even more carefully all the ramifications of your business for any tendency towards rising overheads.

Have you ever considered how unnecessary overheads can be saved by synchronising routine-records? Records covering each phase in the completion of an order—i.e., requisitions, stock-movements, works progress, billing, warehouse-notes, deliverance-notes and so on.

By using PRIMUS Continuous Forms all the necessary instructions for the departments concerned can be produced AT ONE WRITING. Think of the time and effort saved by this method! It amounts to at least 30% and may well be considerably more according to the number of copies of records required and variety of such.



The PRIMUS attachment, as supplied by us, fits any typewriter and facilitates the smooth flow of continuous forms. It allows the machine at a moment's notice to be used for either billing or ordinary correspondence work

You cannot increase your overheads by using PRIMUS Forms, that we guarantee. You can however effect savings and smoother routine workings, as well as eliminate all the trouble arising from inefficient recordings.

For further information write to

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Telephone: HOP 0204-5-6

Plastic Bearings now Cut Down Machine Maintenance Costs

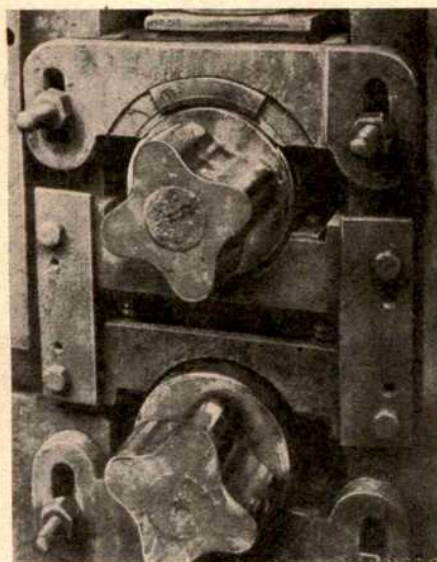
EVERYBODY is familiar with the plastic materials that form fountain pen barrels, radio cabinets and a hundred and one other products in everyday use. But plastics for bearings in the great presses of steel rolling mills and in other heavy duty machinery that needs bearings of vast strength and durability—that sounds like a different story.

Yet to-day laminated plastic is the material to which these machine makers

water from pulp paper. They last six months; metal bearings last 4 weeks.

In steel mills, tests proved that 104,000 tons could be rolled when "Tufnol" bearings were used, but only 3,000 tons with bronze bearings. The plastic bearings were still good for many more tons, though the bronze ones were of no more use. In length of service, the former lasted for six months, against the bronze bearings' life of only ten days. The saving in power, too, varied from 15 to as high as 80 per cent.

Plastic bearings have also proved useful for small machinery and medium and high-speed work, particularly in the motor-car industry. In general, they may be used in many cases instead of white metal, bronze or lignum vitae.



These plastic bearings are doing heavy duty in a steel rolling mills and are lasting 6 months as against bronze bearings' life of 10 days

and users are turning for results that are far better and cheaper than those given by metal components.

Experience is showing that laminated plastic bearings provide a saving in power of 50 per cent; often as much even as 80 per cent. Their life is in many cases 800 per cent, and in exceptional cases 1,800 per cent greater than metal. They reduce costs also because they need less attention and require only *water* as a lubricant.

Other important features are: (1) if a seize-up should occur, although the bearings would char the shafts enclosed would not be damaged. (2) Being impervious to oils, suds, grease, graphite and most acids and chemicals, they resist acid-laden water or fume-laden atmospheres.

Here are some users' experiences:

The North Middlesex Gas Co. installed "Tufnol" axle bearings in a coke conveyor at their Mill Hill works. They are still working well after eleven months' service. Metal bearings previously wore out in three months.

In a leading paper mills plastic bearings are used in a pump that works for six 1½-hour periods a day, submerged in

Manufacturers can profitably bear in mind other applications of laminated plastics, apart from use as bearings. For example, plastic links in a wrapping machine have increased speed of operation and output by enabling a reduction in weight of moving parts.

Many drives do not require gears of exceptionally high-strength materials, or gears cut to precision limits. The natural resilience of plastic gears enables them to withstand shock loads better, and to absorb effects due to inaccuracies in commercial gear cutting. They have good wear-resistance, remain unaffected by atmospheric conditions and are silent in running.

Laminated plastics are also used, for example, as fans in chemical works, wheels of trolleys for general purposes, bearings in plating vats, etc.

Manufacturers interested should get in touch with the plastic firms with regard to their own problems. For names write to: The Editor, Business, Whitefriars House, Tallis Street, London, E.C.4.

Your Ropes and Lifting Tackle: Do They Meet The Factories Act?

DANGER to life, damage to goods, costly delays due to breakdowns, as well as penalties under the new Factories Act may result through your ropes and lifting tackle being not up to scratch.

Like machinery and other plant, ropes behave exactly according to their specification, condition and manner of use. But whereas most machine users know the capabilities of their plant, few people know anything so definite about the capacity of ropes.

Valuable, therefore, is the illustrated data booklet just issued by the Rope,

Twine and Net Manufacturers' Federation. Here are set out the findings of an expert committee. The information given tells you all about ropes: what they can do, with margins of absolute safety; what they *cannot* do; and also it tells you how to take care of your ropes and lifting tackle.

Most important, too, the booklet explains your legal responsibilities for ropes and lifting tackle under the new Factories Act.

You can get a copy of this booklet (9d. post free) from the Federation at Bush House, Aldwych, London, W.C.2.

A Special Conveyor Belt Saves This Firm Over £1,000 a Year

TO carry ice up to one floor from another lower down was the problem in a certain chemical manufacturing plant.

The ice was made in special shapes and was wanted that way, unchipped

and undamaged, on the higher floor where it was used.

Various types of hoists and conveyors had been tried, but none could handle the ice without a good deal of it slipping about and becoming damaged.

Finally a well-known rubber manufacturer designed a conveyor belt surfaced with short rubber "fingers."

Thereafter a continuous flow of ice was maintained, undamaged, between the two floors.

We might forestall any remark about the two floors being separate by explaining that in this factory it was not structurally possible to have the ice-making and the ice-using departments on the same floor level. This possibility of course had been thoroughly gone into. The special rubber conveyor belt therefore was the solution. In gross it saved over £1,000 a year.

How to Organize Your A.R.P.

The first of three important articles by a firm that has investigated all the problems involved, is given

on page 17 of this issue

S.P.B. Mais speaking ..

Are you on the Telephone?

"It's an absurd question, isn't it? It is difficult to imagine how business houses ever got on without the telephone.

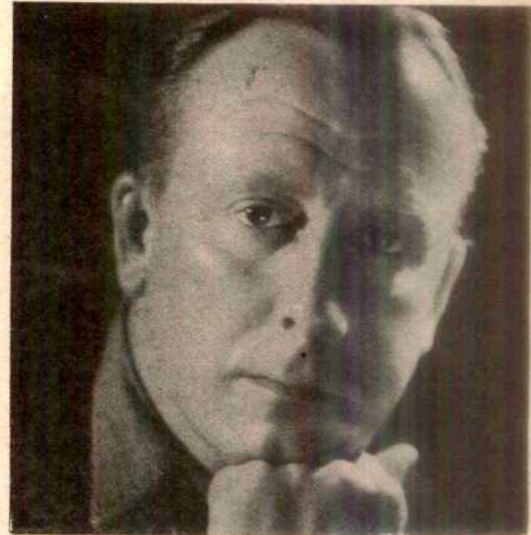
"Yes, but how long was the machine invented before the old-established business houses acknowledged its existence?

"Very soon it will be as silly to ask 'Have you a Remington Electric Accounting Machine?' They are almost as indispensable as the telephone, but man is a contrary animal. He fights, and fights hard, against any innovation.

"I write several millions of words a year, and yet you'll find me still sitting at an old-fashioned desk littered with papers, writing everything out in longhand with an old pen. I know that in the end I shall have the sense to type and to dictate into a dictaphone and thereby increase my efficiency, conserve my energy, and at least double my output, but I keep on putting off the good day.

"Do you? If so, why?"

S.P.B. Mais.



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ANALYSIS
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LEDGER POSTING
PAYMENTS

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COSTING
STORES RECORDS
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- 4. Automatic tabulation and interchangeable form bars.
- 5. Complete visibility of writing line, permitting instant checking of every entry posted.
- 6. Automatic line proof of each individual entry provides instant audit.
- 7. Independent control of each related form to be prepared simultaneously.
- 8. Uniform legibility of all records entered simultaneously.
- 9. Automatic locks against mis-operation.

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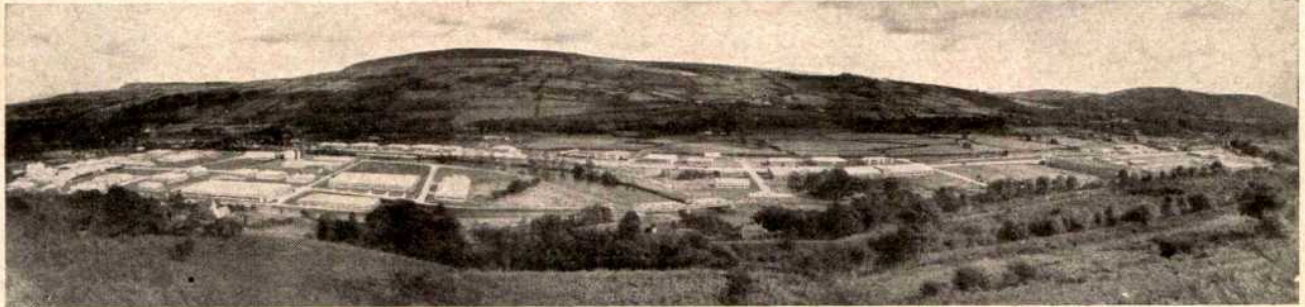
Phone : Mansion House 3333

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INDUSTRIAL MANAGEMENT

Equipment — Buildings — Sites



An "Industrial Park" they call the Trading Estate at Treforest, South Wales. This panoramic view of it shows that the pleasant name is certainly not without foundation. The clear country air and healthy surroundings are highly advantageous to many types of manufacture and to *all* personnel

At Treforest To-day, There's a 'Planned' Factory Ready For *ANY* Industry

By C. E. DAY
"Business" Investigator

SOUTH WALES has become a centre of light industry. This significant change has taken place within the past three years. It is so important that every Executive on the board of any manufacturing firm in Britain should be aware of it, for South Wales has shown that its facilities are suitable for the whole range of industry, from heavy to light.

It is from this new viewpoint that business men must now look at South Wales. That is not an easy thing to ask because established opinions or convictions, rightly or wrongly held, are hard to change.

Treforest Now Has About 80 New Manufacturers

Industrially, South Wales has for generations been known as a centre of coal, iron, steel and shipping. The Welsh were always among the first to scoff the notion of secondary industries being set up in those rich coal mining

valleys. Even when depression had impoverished them they were, in the main, sceptical about the new industries.

But the "visionaries" of a few years ago have been proved right. Light industries have been established in the area. What is more, almost without exception, the new firms are flourishing.

This rebirth of the area is largely due to the National Industrial Development Council of Wales and Monmouthshire and the South Wales and Monmouthshire Trading Estates, Ltd. Between them they have brought scores of manufacturers to the district in the past three or four years. On the Treforest Trading Estate alone there are now about 80 tenants, most of whom are already occupying factories in part or full production.

Those who do not know South Wales can hardly realize how deep and vital is this development. When I first went there, about four years ago, the change-over to light industry—or rather the attempt—was not meeting with notable success. The tradition that South Wales was a home of basic industries and, therefore, suitable for secondary industries seemed to frustrate hope of progress.

Records Show Labour Bias is Unjustified

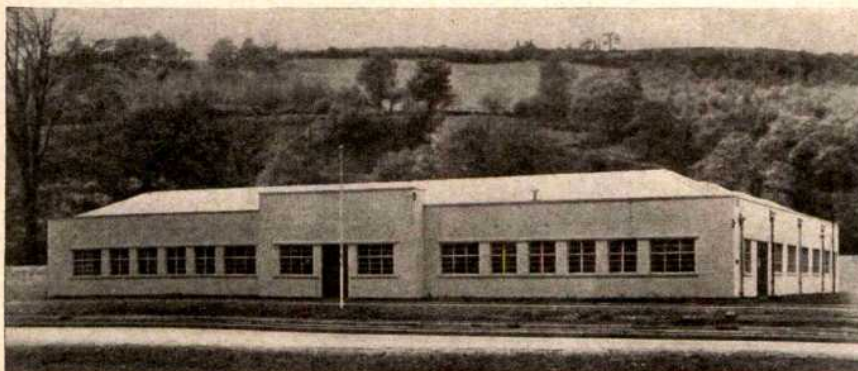
The National Industrial Development Council found they had a hard job to convince manufacturers that the abundant raw materials on hand, the power, gas and water supplies and the transport facilities were as good as to be had anywhere—and better than most.

More difficult still was the labour problem. In addition to the fact that skilled factory workers were comparatively scarce in the area, the Welsh workman had, unjustifiably, a bad name among employers outside Wales. Records support the fact that Welsh workers are loyal and industrious. But a few disputes in the coalfields, much publicized, had built up a prejudice.

That the bias against the Welsh worker is unjustified can be proved by the new manufacturers who have located in the area. Not one employer among the many I have talked with has had any labour trouble. Most employers have praised their staffs for adaptability and industry.

Before I deal in general with the facilities that are attracting manufacturers to South Wales let me go into the labour problem. Under present circumstances it is particularly important.

Manufacturers in all parts of the



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country are likely to experience a shortage of skilled and semi-skilled labour later this year. At the same time economists forecast an increase in the demand for consumer goods for the mass market. Any location, therefore, where an abundance of labour is available is of special interest to-day.

The labour in South Wales has answered critics who questioned its adaptability, intelligence, skill and loyalty. Let me recount a few of the interviews I had with managing heads of firms recently located in the area.

150 Skilled Staff Built In 18 Months

A certain firm at Treforest carries on manufacturing processes new to this country. In less than 18 months the two partners have been able to build up a skilled and semi-skilled staff of about 150.



Treforest Estate roads are double-track highways, with kerbed grass dividing strip. Note the wider grass verge which sets the factory buildings conveniently back from the road

"We started by employing seven local persons," one of the partners told me. "These we trained in the simple processes in the factory. Those who showed aptitude for the work we moved up to more difficult jobs and took on extra hands. With the help of those we had already trained, or partly trained, we broke in the newcomers."

"By this system," he continued, "we have been able to build up our staff rapidly. They have not all, of course, been successful, but the percentage that cannot learn quickly enough to be worthwhile is very small—less than 5 per cent."

The managing director of a factory producing a special kind of knitwear goods said:

"Our particular work calls for a high degree of intelligence, and we were prepared for a lot of trouble with local labour when we located at Treforest. We have been surprised, therefore, to find how adaptable the Welsh girls are."

How Unskilled Girls Become 'Work Perfect'

"It is not that they are quick workers at the start," he explained, "but they are careful. Our instructors find that the girls will make completely sure they have learned how to do a job before they will say they can do it. And once they say they can do it you can rely on them not to make mistakes. That fact has saved us money."

"I feel quite confident," this managing director concluded, "that if the

girls can learn to do our work so well in such a short time they are capable of working in most light industries. That opinion, I might add, is supported by executives of other firms located here and elsewhere in South Wales."

Key Men Needed for Only One Month

Another good instance of the quality of local labour comes from the management of a firm producing a special type of twisted steel for concrete reinforcement. This firm had two key men from London to teach 30 young men from the local employment exchanges. In a month one key man was able to return to London; the other stayed because he was a Welshman.

A firm which has started light engineering in a factory at Dowlais has had similar experience. Indeed, I could quote instances of one kind or another

from scores of companies which have started factories in the area during the past three years.

Here is a Labour Reserve 237,000 Strong

Better still, from the outside manufacturer's viewpoint, is the abundance of untapped labour available. Around Treforest there are about 125,000 men and nearly 112,000 women between the ages of 20 and 64. Nor, despite the flow of young populace from Wales in recent years, is there likely to be a dearth of youthful labour. For example, there are nearly 12,000 girls and boys of over 11 in the Pontypridd and Rhondda areas alone.

The facilities which have contributed to the industrial might of South Wales in the past are proving their value to the new industries. In addition to the plentiful supply of labour already

mentioned, main advantages can be summed up under seven heads: (1) raw materials, (2) rail, sea, road and air transport, (3) cheap and unlimited supplies of water, power and gas, (4) financial aid in starting a new industry, (5) factories for rental built to your own specifications, (6) outstanding social amenities, (7) a "doorstep" market of 4,000,000.

Materials on hand or available from neighbouring areas include coal, iron, steel, timber, chemicals, tin, lead, clay, slate, brass, copper, leather, metal stampings, textiles, glass, fish, fruit, farm produce, etc. The ports of Cardiff, Swansea, Port Talbot, Newport and so on simplify, of course, the problem of importing raw and semi-manufactured materials. Costs can be kept to a minimum.

Direct Rail Link With All Important Centres

South Wales is within easy reach of most of the important centres in Britain. Distance from Cardiff to the main cities and towns is: (miles) 378 Edinburgh, 381 Glasgow, 295 Newcastle, 279 Carlisle, 203 Leeds, 240 Hull, 199 Bradford, 181 Sheffield, 169 Manchester, 161 Liverpool, 161 Nottingham, 153 London, 143 Leicester, 122 Southampton, 108 Birmingham, 56 Gloucester, 45 Bristol.

Fast, main-line services day and night run to these centres. Thus there is direct rail communication with the whole of industrial Britain. And the system of branch lines which serves the coal valleys can be used by the factories located at Treforest, Merthyr, Dowlais, Abertillery and elsewhere. Goods can be shipped by rail from factory sidings and sent via Newport, Swansea, Cardiff, or whatever is the nearest main-line station.

They can, too, of course, be sent to main depots by road. For instance, the Treforest estate is traversed by the Cardiff-Pontypridd main road. This provides a direct route to Merthyr and the north of England, westward to Swansea and Fishguard, eastward to Newport, Gloucester and London, southward to Bristol and Southampton. Factories located in the valleys in this area have good access to this highway, even if they are not on a main road site. There is a network of good secondary roads linking with the highway.

(Continued on page 47)

Treforest has this new British industry. Formerly, foreign manufacturers monopolized the roller skate market here. Now, this British firm not only supplies much of the home demand, it also exports to the former exporters





THE ALL-BRITISH POWERS PUNCHED CARD ACCOUNTING

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OFFICE MANAGEMENT Practice and Equipment

For the Small Firm . . .

The Speed And Accuracy of Machine-Accounting — *But Without Its Cost*

MANY an executive of the smaller firm, looking into and appreciating the virtues of mechanical accounting, must have wished that its advantages of speed, accuracy, duplicated records, and simplicity of control could be his without incurring an outlay entirely disproportionate to his total assets.

To-day, his wish can be satisfied: for a very moderate outlay he can have a system that has been tried and proved by many firms in the front rank of repute and progressiveness.

This is the Equipment Required

The equipment and supplies needed are quite simple and inexpensive in character. They comprise:

1. The Recording Tablet: This is the principal feature on which the whole system turns. It consists of a flat light metal plate fitted on the left-hand margin with two clamping bars, so arranged that a journal sheet can be held in a fixed position on the tablet whilst entries are being posted to a number of ledger or other sheets placed in position successively and securely held by the second bar whilst the work is done.

2. Definitive Stationery: In this system simultaneous duplication is achieved by carbon copies arranged in strict relationship to one another by means of the recording tablet.

To ensure absolute clarity, a hard type of pen is used in conjunction with stationery designed to enable four clear carbon copies to be taken, using ordinary pressure in writing. The carbon record is made proof against smudging or erasure by treatment after entry with a chemically impregnated blotting-pad.

The sheets are, of course, loose-leaf, carefully cut and printed so that when placed in correct position on the recording tablet all spacings align exactly.

3. Cabinet: The cabinet to contain the sheets is quite normal except that it is equipped with metal plates for the purpose of dividing off the sheets into convenient groups. A succession of slots in the base of the cabinet per-

mits of exact positioning of these plates, and an independent arrangement employing a cross-rod enables them to be so adjusted that the sheets are supported at a convenient angle for selection in posting.

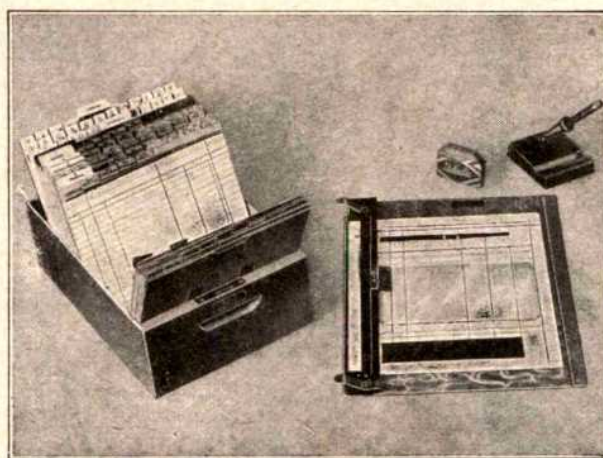
4. Signal Tabs: Signal tabs of a very distinctive character are utilized in conjunction with the system, distinctive in that they can be made to carry out three functions. They will designate by colour or by position, and they form a clip system for two or more supplementary sheets.

They are made of flexible celluloid material, partly for ease of manipulation if it is desired to make typewritten records on the sheets, and partly because this form of tab most readily lends itself to affixing by means of slits punched in the sheets.

A double line of "stepped" slits is provided by machine-punching the top edge of each sheet, and there are 31 pairs of slits provided, each suitably numbered.

Thus, by a combination of colour and position a very wide range of code signalling is possible.

By C. H. COSTELLO, A.C.I.S., A.C.W.A.



Here is the complete Definitive equipment. It consists of Recording Tablet, Cabinet and Visible Index, Blotting Pad and Stylo

Whilst the arrangements for signal tabs are not an essential part of the accounting system, they provide facilities of the utmost value in making it as versatile as possible.

Thus, stiff guide-cards can be provided ruled to take a number of entries in alphabetical order on the front. Along the top edge of each card are printed the numbers 1 to 20, and the sheet applicable to each entry has its celluloid tab placed to coincide with the position of the relative number. By a glance at the guide-card the number of the required designation may be noted and the sheet selected by its tab instantly.

The merit of the arrangement, of course, is that the sheets do not need to be kept in any particular order, since the positioning of the tab always remains unchanged.

This is How the System Works

Following a practice which is usual with machine accounting, the posting is carried out from the original record, such as an invoice, direct to the ledger

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Throughout the country—confectioners and cafes have benefited from the assistance of Mr. Plane. This is hardly to be wondered at when it is borne in mind that the younger generation, who exercise a definite influence on the purchase of confectionery, are more responsive to the aeroplane than any other advertising medium. Moreover, Mr. Plane operates at times when money is about to be spent on satisfying the cravings of the "sweet tooth".



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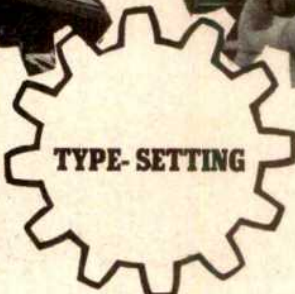
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sheet, omitting the orthodox separate journal entry.

By means of the recording tablet, however, a master or control sheet is prepared simultaneously, and this gives the complete record of each group of transactions, whether debit or credit, and the totals represent the control

the purpose of positioning the next ledger sheet, the position of the last entry made.

When all the entering is completed, a cast of the journal gives a control total which can be checked independently by a straight machine-list of the invoice totals.

an identical error can have occurred on the ledger sheet and statement.

The foregoing illustration of the principle makes it clear that a number of simultaneous postings can be carried out on any type of record where the data is identical. Thus, it is practicable to complete at one operation journal, ledger sheet, monthly statement, traveller's sales list, and dispatch note.

Statements are usually clipped temporarily behind their corresponding ledger sheet, held in position by the signal tab passed through the slots on both sheets with a carbon sheet interleaved. By this means any debit or credit entry must be duly recorded on the statement, and the final result be a faithful copy of the account in the ledger.

For those with a greater volume of work who prefer typed records, a special multiple front-feed typewriter can be supplied, which enables similar operations to be carried out by typewriting.

How Clerical Time and Costs Are Saved

The forms used may be of different depths and for a number of purposes. Each of the forms is fed into the machine to the required line, so that, for example, line 5 on the ledger sheet, line 20 on the traveller's sales list, and line 10 on the journal sheet are typed simultaneously. The alignment is automatic and exact, all form positioning being governed by a special numbered control lever.

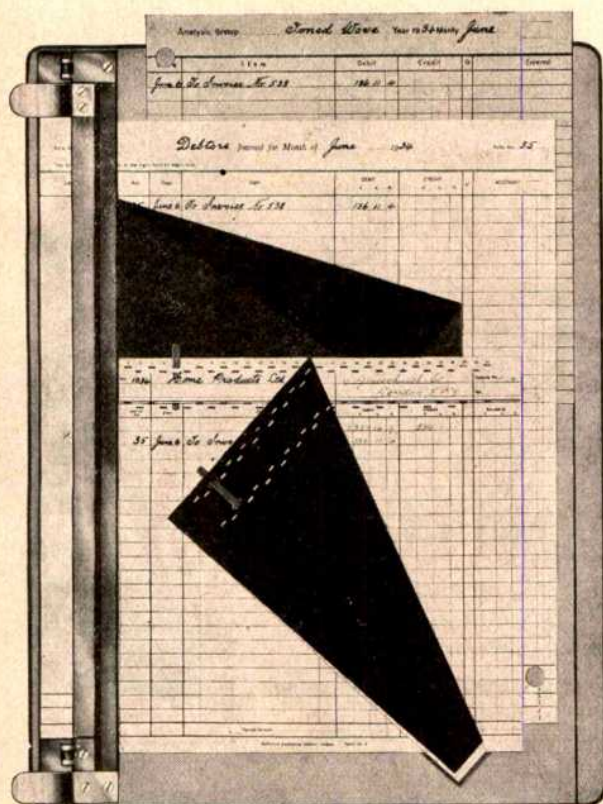
Here are some typical applications of the Definitive Accounting system:

For example, it is used by a famous firm of "chain-shop" caterers in their wholesale department for the purpose of sales records.

The volume of work to be handled is such that mechanical posting would not really be justified, but this accounting system enables approximately similar results to be obtained by hand posting.

They are able to prepare the invoice, dispatch note, ledger sheet, ledger copy

(Continued on page 41)



A Feature of this System is its Simplicity

This is the Recording Tablet showing Ledger Sheet, Statement, Journal and Analysis Sheet immediately after making an entry, but before entering the customer's account number in the right-hand column of the Journal

figure, either daily, weekly or monthly, as required.

As an Example: Posting the Day's Invoices

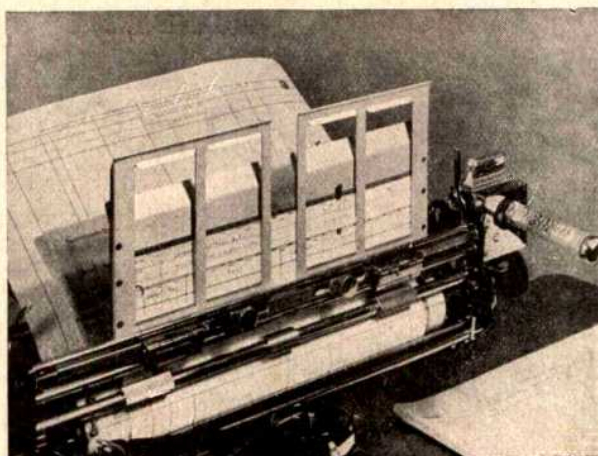
Let us take, for example, posting the day's invoices in a factor's office:

The entering clerk takes the recording tablet and inserts the master sheet, in this case the sales journal, under the second clamp and aligned on the margin. He then selects successively the appropriate ledger sheet and statement from the cabinet by reference, if necessary, to the numerical list on the alphabetical guide-card, and places them under the top clamp in such position that the next vacant line on the sheet is immediately superimposed upon the next vacant line on the journal sheet in each case.

Carbon paper is interleaved, of course. The respective entries are then made, using the definitive pen or other hard nib or stylo, and the same record is thus made on all three items—journal, ledger sheet and statement—simultaneously.

The journal sheet contains an additional column which projects beyond the ledger sheet when in position, and in this is entered the customer's account number, thereby providing a cross-reference and also indicating, for

Any error in posting can be tracked down with the greatest of ease. In the first instance it will be revealed by a difference in the totals of journal and machine-list. It is then only necessary to call over the invoice totals with the corresponding entries on the journal sheet to detect where the error has occurred. Since the corresponding ledger entries are by carbon copy, only



This illustration shows the Definitive bookkeeping typewriter featuring multiple front feed and automatic alignment of sheets up to eight in number

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Civic administration and all commercial services are highly developed and it is a significant fact that over one third of the country's total exports leave Lancashire ports. Factory sites are available to meet every need, and there are spacious and well-constructed factories for rent or purchase at attractive prices.

Inquiries for further information and expert advice on the available factory locations are treated in strict confidence.

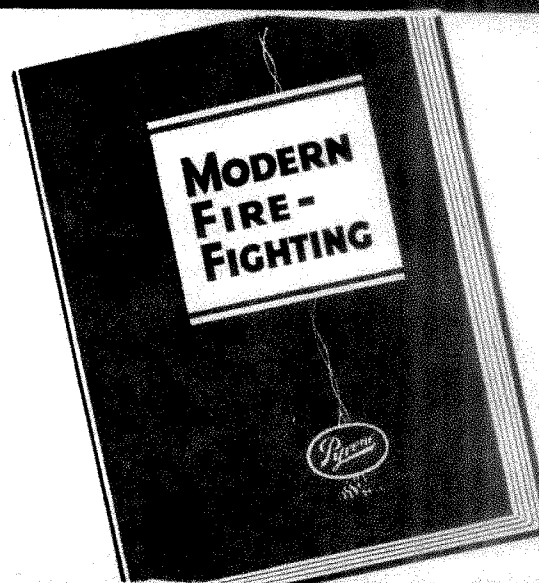


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'Pooled Typing' Cuts Costs and Raises Output

A PROPERLY organized system of "pooled" typing may be the means of: (a) cutting office costs by at least 50 per cent, (b) releasing labour for other departments and (c) giving better service to executives and to customers.

The system can be operated with success by most firms, but it is especially effective in medium and large organizations. For instance, Ultra Electric, Ltd., radio manufacturers, have obtained tip-top results from using the system.

Previous to setting up a "pooled" typing department, the firm operated the usual system of secretaries and general typing. Heads of departments and other key men had a secretary each. Copy typing and other routine work went through a central typing department.

Dictating Machines Replaced The Secretaries

The new system eliminated the use of secretaries. In their place executives were given Dictaphones. They were instructed in the use of the machines, and very soon the new system was working smoothly.

Next the firm measured the time for typing standard forms and routine letters, etc. By this means work was apportioned to each operator to keep her fully engaged throughout working hours.

It was found that these two moves—the use of dictating machines and the scheduling of routine work—*cut down the staff needed from 42 to 27*. Output was actually increased in total volume as well as per typist. Nor were the girls overworked. As they grew familiar with the system they liked the steady flow of work.

Under the old method the use of individual secretaries meant much waste of time. The girls, for instance, had to spend in total many hours taking dictation. Often they had to wait, inactive, over long periods because of interruptions. Other times they would be called from their transcribing to answer some query or to take notes that their chiefs had overlooked.

Similarly, there was little or no control over the routine work. It was sent through in batches to be typed. There was no "flow" production, no ordered method of distributing it among the available typists. While one girl might be piled up with work, another would hardly have enough to keep her busy.

The use of a "pooled" typing department has eliminated all that. Work sent in from all departments of the business—cylinders for transcribing or routine typing—is checked in, controlled in process and checked out. The time and cost of each letter is controlled

From
ULTRA ELECTRIC
LTD.



through the work schedules set for each girl.

Stocks of all standard forms, documents, routine letters and so on are kept in the department. The head of the department has them under her control. As each job comes in the necessary materials are drawn from stock, noted and issued to the girls who are to do the work. Previously each department kept its own forms and documents. This resulted in considerable overlapping and waste, which is eliminated through the central store system.

Enables Files also To Be More Centralized

The main files and similar reference sources are also kept in the department. Certain files, of course, must be kept on hand, in the departments concerned. But there is no need, for example, for each executive to keep a separate correspondence file any more than each should have an accounts file.

How One Operator Can Produce 2,000 Completed Letters An Hour

TO TYPEWRITE 2,000 letters per hour requires about 80 typists working at top speed. Yet one operator can produce this quantity of letters in an hour on a new electric addressing machine.

Each letter, produced complete with name, address, appropriate salutation and facsimile pen signature, looks just like an individually typewritten letter. The letters are "personal." The proper salutation is contained on the address plate. As each letter heading is fed to the printing point the "Dupligraph," as the machine is called, also feeds—automatically—a different address plate, bearing a name, address and salutation. Each plate is automatically registered

All correspondence is mailed from the typing department. Letters and other material to be signed or checked by department heads are delivered and collected by messengers at scheduled times. This means that all post for dispatch that day is in the typing department at a specified time in the afternoon.

A typical example of the savings effected through this reorganization of the office is that of "communal" envelopes. Often there are a number of letters which are to go to one address. These are now all put into a common envelope for posting. Previously, when each department attended its own correspondence, there was no means of knowing if more than one letter was being sent to an address.

In any reorganization there is usually an influx of small ideas such as this, subsidiary to the main change. Another small move in this case has led to more savings in postage costs. By using a new type of semi-open envelope volumes of mail previously sent under 1½d. stamps can now be posted for ½d.

Reorganization Cost Paid for Inside First Year

A factor which has contributed to the success of the "pooled" typing department is the first-rate working conditions of the office. There are windows on three sides. The staff, even in the centre of the room, can work in daylight throughout most of the day, winter and summer. Each typist has a desk equipped with a full range of drawers for carbon papers, ribbons, erasers, personal possessions, etc. There is ample space between desks and plenty of room for all to move about freely.

The cost of reorganization has been more than paid off in the first year. The savings in labour costs and on postage has seen to that. At the same time the service given by the department has been greatly improved. There is now no overtime in the typing and posting work.

into the body of the letter, so that names, address, date, and body of letter are all "typed" at one operation through the same ribbon. This gives perfectly uniform results. At the same time the signature is added in ink of any colour, so that the letters are complete in every respect.

The address plates automatically refile themselves in their original order.

If production of 500 completed letters per hour would meet your needs (and it would get through a pretty big list in a short while), then the hand-operated "Dupligraph" can be used. As with the electric model, it typewrites letters and uses the "Addressograph" metal plate to "personalize" them.

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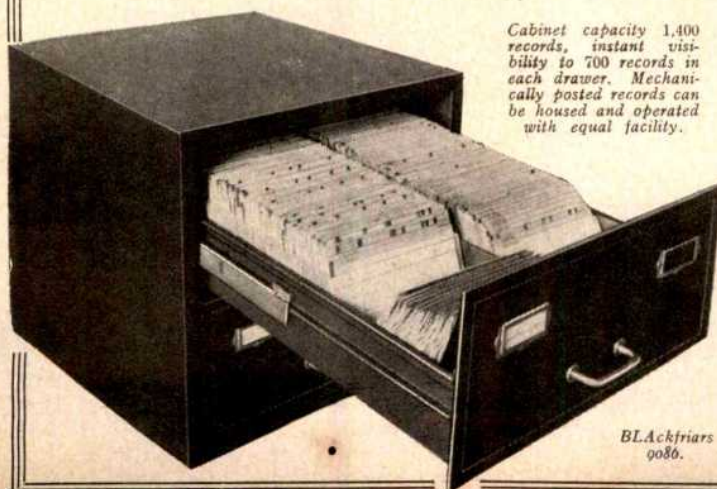
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TIME . . . it *Has* to be Paid for, so *Control It Accurately*

EVERY single function in industry is based on the factor . . . *time*. The accurate recording and analysis of time used in factory or office is therefore of utmost importance to every firm. That is why time-recording systems are to-day recognized as an integral part of any management policy aiming at keeping costs at the lowest economic level.

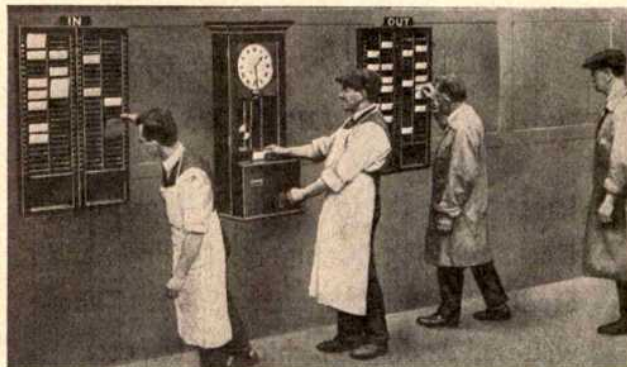
Although many firms still use casual methods of checking employees "in" and "out," morning, noon and night, the increasing knowledge of the value of costing and control is making the revision of this policy a matter of increasing urgency. More and more firms are installing scientific time-recording systems.

Time, the Constant Factor in Many Costs

Also strengthening the need for such systems is the fact that in many factories to-day it is usual for operations to be calculated as *time*. A certain quantity of, say, machined parts or a given number of products are said to be worth so much time, not this or that amount of £ s. d. Time is considered the best basis of measurement because the composite term "wage or labour cost"—on which machined parts are calculated—is a product of time and wage rate. Of the two factors the latter is the one subject to arbitrary change.

With the expanding demand for time control has come the necessity for synchronized time records; where large installations of time-recording machines are contemplated, it is usual to install electrically driven apparatus acting on

In some businesses the mechanical clock time control system is the most advantageous. Experts are ready to advise you on this point



the impulse system whereby the records from all recorders in a group are identical at all times.

The Gledhill-Brook Company were the pioneers of the electric impulse drive for time-recording machines.

The Gledhill-Brook impulse time-recorders are, of course, subject to the same rigorous tests as their mechanically driven apparatus, while it is claimed that the electrical units possess three other definite advantages: (1) no clock winding is necessary; (2) the recorders continue to function independently of any temporary failure of the mains power supply; (3) installation is nearly always possible where local conditions do not favour mechanically driven recorders.

The Electrical System Gives Focal Point Control

With the electrically driven system a master transmitter is required to control the time of the recorders, the number of which will naturally vary according to individual requirements. This transmitter acts as the "time-piece" of the whole system and is a precision instrument which automatically keeps accurate time within a second or two a month. It is housed in a well-finished case with a glass front and can be locked.

The possibility of a failure of the mains power supply stopping the system and thus creating great inconvenience both to management and staff is eliminated by incorporating a stand-by battery in the system. The transmitter takes its power from the battery, which may consist of dry cells, Leclanche cells or accumulators.

The battery is charged from the main, and expert advice is given to each user by the Gledhill-Brook Company as to the type of cell most suited to the individual circumstances of his business.

Control of the battery is effected by a charging panel, which has been designed to need the minimum attention, the changing of a battery switch once a week being all that is usually necessary.

Any reader who doubts the psychological effect of a scientific time-recording system should bear in mind that honest employees will not be resentful.

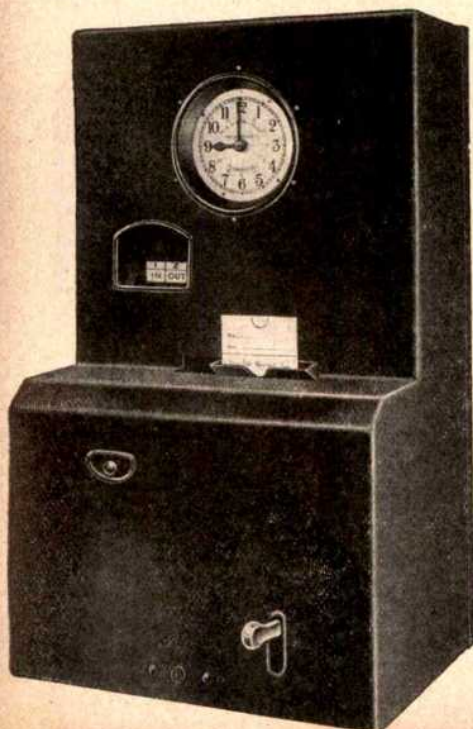
Staff realize, almost as well as the management nowadays, that efficiency demands accurate control of operations and men, and they further appreciate that a time-recording apparatus is quite impartial.

Moreover, although employees may not be deliberately late in arriving, or early in going, their tendency is, when no definite supervision is exerted, not to consider odd minutes. If a firm employs 200 persons, all of whom arrive two minutes late every morning—probably more by habit than design—40 hours for which the firm pay wages yet receive no work are wasted every week.

Instances such as the one described can be multiplied many hundreds of times, and in each case the installation of a time-recording system would save the business concerned a substantial sum over a year.

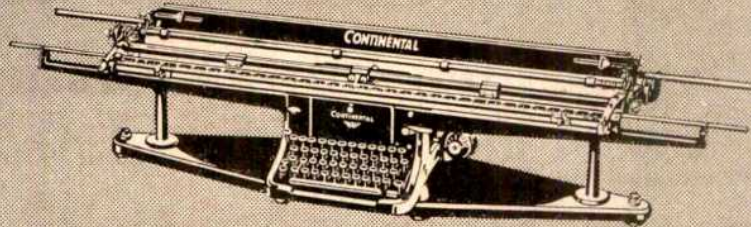
Free Advice Available for all Your 'Time' Problems

Time-recording systems are fundamental in costing, cost control, wages and labour statistical control, etc. Gledhill-Brook experts are available to discuss special problems of this nature, and an important point is that they do not advocate one rigid system. The appropriate and cheapest adaptation of the time-recording system is suggested in each case. This free service has helped innumerable firms, large and small, to save many thousands of pounds a year.



Here is the metal case electrical recorder, time-controlled, as are all other clocks on the circuit throughout the building, by a master electrical impulse transmitter. More and more firms are getting to appreciate the value of electrically controlled time

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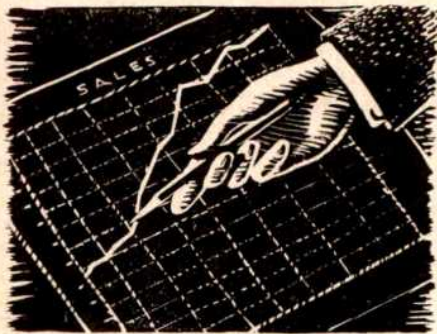
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A NUMBER of insurances, all of particular interest to business firms, are grouped by insurance companies under the name of "engineering insurance." Wide terms of protection are offered to owners of all types of prime movers, cranes, hoists, and lifting appliances, boilers and pressure vessels of all descriptions.

During the last ten years or so engineering insurance has been greatly developed and now ranks as one of the most important classes of insurance to any industrial organization. The recent Factories Act added considerably to the responsibility of industrial firms, particularly in the lighter industries. Section 2 of the Act places upon manufacturers the onus of providing certificates of safety for pressure vessels hitherto excluded from the Boiler Explosion Act and Factory Act, 1901. Similar provisions are enforced in regard to all kinds of lifting plant—cranes, hoists, pulley blocks, chains, etc.

Here, Loss PREVENTION is Pre-dominant Feature

The surest and simplest way of obtaining the necessary certification is to arrange for periodic inspection by an insurance company's engineers, in conjunction with insurance of the plant.

There is a special feature which distinguishes engineering insurance from other types of insurance. Insurance in general is concerned with indemnifying policy-holders in the event of loss. In engineering insurance the emphasis is on the prevention of loss, by regular inspection.

Insurance companies which undertake this class of business employ staffs of qualified engineers, each one an expert in his particular field. There are, for example, marine engineers, holding a Board of Trade Certificate and dealing with inspections of boilers and pressure vessels. There are specialists for electrical plant and others for cranes and hoisting appliances. The rapid progress in the use of oil as fuel for prime movers has necessitated the adding of crude oil engineers to the staffs. In addition there is a technical staff at the company's head office to check the reports from the various inspection engineers.

Periodic reports and advice are passed on to the owners of the plant insured. Policy-holders of the leading companies

specializing in this class of work are thus assured of very valuable service. This operates to the advantage of both insurers and insured, since the result is that breakdowns or accidents in connection with insured plant are very rare.

If, in spite of all precautions, a mishap does occur, there is insurance protection, not only against loss through damage to the plant itself but also against third party claims. The latter might obviously be exceedingly heavy in the event of, for instance, a boiler explosion or a crane accident.

Incidentally the owner, if he has had his plant regularly inspected by an insurance company's experts, will be in a much better position for refuting any suggestion of negligence in the event of a Board of Trade inquiry.

In addition to regular inspections, reports, and advice on the economical working of plant, the engineering departments of insurance companies undertake other services, some of them very useful. These include advice on the purchase of plant, examination of plant before purchase and supervision of construction at the makers. Fees are reasonable.

Accurate Address Locator Ready to Serve You

MOST executives frequently need to make quick and accurate reference to other business firms. Delay or error might be costly. That is why business men should keep on hand such a reference work as *Sell's Directory of Registered Telegraphic Addresses*.

The fifty-fourth annual issue of this well-known work has just been published (45s. from Business Dictionaries, Ltd.). It contains much new information of importance to business concerns. Did you know, for instance, that the Post Office have instituted a new method of dealing with telegrams to speed up delivery? In provincial towns where a postal indicator system is in force the abbreviated address consists of the word registered and the name of the town of destination, followed by appropriate postal district initials or postal delivery office number.

The various sections of the volume are arranged to make easy reference.

The Speed of Machine-Accounting Without Its Cost

(Continued from page 34)

and traveller's sales sheet simultaneously, thereby making a remarkable saving both of time and labour. Something like 50 to 60 per cent of the time formerly required for separate postings is saved under the simultaneous posting system, with the result that clerks are released for other duties and an appreciable saving in wages cost is achieved.

Record Becomes More 'Topical' and More Accurate

It goes without saying, of course, that the records are much more up-to-the-moment than is possible with separate entry, and that accuracy must be easier to maintain.

As another instance of the versatility of this system may be mentioned a well-known firm of steel rolling mills which employs it to maintain running balances in stock records.

It has been found practicable to post stock receipts and issues simultaneously, entering both physical and financial figures so that not only the quantity of stock in hand at any particular time is known, but also the cash value of it.

In conjunction with this the requisitions are completed with the value of stock issued so that costing sheets can be accurately posted therefrom.

Still another example is that of a chain boot and shoe repair business where the system is used for the control of wages.

The office work is centralized and each week there is prepared simultaneously an earnings record, weekly wages payment sheet and branch record. There is, in this particular business, a fairly large inter-branch movement of staff, with the result that branch wages costing would be difficult to ascertain were it not that the branch records as above compiled readily show any fluctuation in wages cost at individual branches.

System Can Handle any Amount of Detail

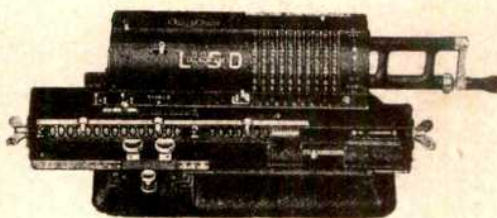
Finally, there may be mentioned a well-known travel agency which specializes in low-cost tours requiring that administrative costs be reduced to a minimum. Here the most general form which the system takes is followed, namely, the simultaneous posting of statements, ledger and day book.

The statements, of course, in this instance are the debit notes which are sent to customers in respect of their tours. The telescoping of clerical work, which in this class of business is very detailed, thus effected is very valuable in achieving the attractive tours at inexpensive rates featured by this particular organization.

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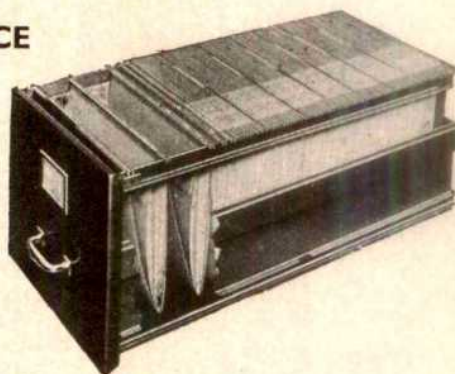
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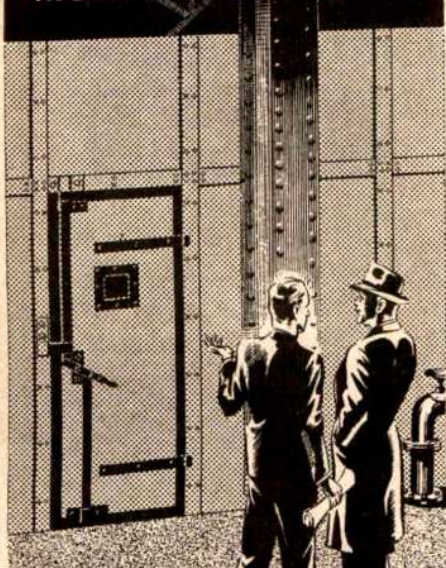
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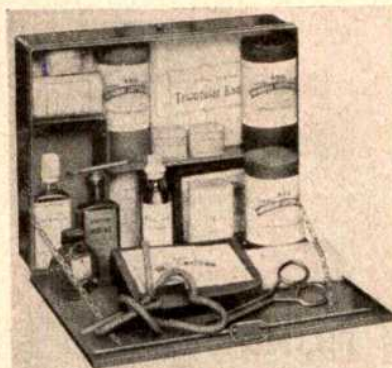
Equipping the Fire Squad . . .

Vital Unit in Your A.R.P. Scheme

(Continued from page 19)

for example, are necessary. One good type for dealing with fire resulting from incendiary bombs is the Mark I and Mark II Bantam fire pumps made by the Pyrene Co., Ltd.

The Mark I pump is a self-contained unit. It embodies a double-acting pump and a length of rubber hose which enables the jet to be projected in any desired direction. The pump has a capacity of 2½ gallons.



This is the 'Minimax' 15/- A.R.P. First-aid Case mentioned in this article

The Mark II model operates on a similar principle, but it has in addition a hose reel and 40 feet of hose. The Pyrene foam-making branchpipe (F.B.00 size) enables this pump to be used as a foam appliance for dealing with small fires involving oils, spirits and other strongly inflammable liquids.

This Syren Has A Range Of One Mile

One of the essentials of fire protection is that warning shall be given immediately, and that it shall be heard. For this purpose a syren such as the Secomak electric syren can be installed. This product is marketed by S. N. Beattie & Co., Ltd. The ½ h.p. Senior model, for example, has a sound range of one mile and three pitches—high, medium and low. It operates from A.C. or D.C. mains or from batteries.

There are several larger or smaller models of this type of syren available. They have all been tested and passed under factory conditions. There is, too, the point that such syrens can be used for ordinary sound signalling as well as for general A.R.P. alarm work.

Here Is An A.R.P. First-aid Case

First-aid outfits are, of course, part of the equipment of fire-fighting squads. A good example of an A.R.P. first-aid case is that marketed by Minimax, Ltd., manufacturers of all kinds of fire appliances, including a wide range of extinguishers.

This company's first-aid case costs 15s. Another well-known fire appliance manufacturing firm is Nuswift, Ltd. This company, for instance, besides

producing the efficient fire-fighting trailer pump unit illustrated in this article, is putting out a very effective "bomb snuffer."

This "Nuswift" bomb snuffer is made of stout gauge steel. A handle is hinged and, when the snuffer is not in use, is standing vertically. A detachable shovel is also clipped to the side of the snuffer so that the snuffer can be easily transported to scene of fire by lifting the appliance as one would carry an open umbrella "upside down."

The shovel is then detached and the handle hinged down to horizontal. Inside the hopper is a cardboard container, in which is sealed 7 lb. of special dry extinguishing flux. This flux was actu-



The 'Pyrene' Bantam Fire Pump, Mark II, with double-acting pump and Hose Reel containing up to 40 ft. of hose. Capacity, 3 gallons. This Unit is shown complete with an F.B.00 'Pyrene' Foam-Making Branch-pipe.

ally invented by the people who are manufacturing incendiary bombs, and as soon as it comes into contact with burning magnesium metals it falls into the pores and crevices of the burning magnesium metals and seals these up so that inflammable gases cannot provide ignition.

On the bottom of the cardboard container is a celluloid window, this is ignited by the blazing bomb, and naturally, as soon as the celluloid is burnt through, the dry flux powder immediately covers the whole of the bomb, extinguishing it.

Perhaps one of the biggest advantages from the lay person's point of view is that the disconcerting glare of a burning incendiary bomb, which tends to cause panic to even the most stout-hearted person, is completely obscured as soon as the bomb snuffer is placed over the burning bomb.

All the firms mentioned here, of course, produce and sell appliances for every phase of A.R.P. fire protection work. They will all be pleased to send readers of BUSINESS information about their appliances.

Wages, and Illness Absentees

(Continued from page 8)

illness, provided that the contract of service remains in existence during that time and that he is ready and willing to carry out his duties save for the incapacity caused by the illness." That is the general Law, and is operative only, of course, when there are no modifying terms in the contract.

Illness, *ipso facto*, does not therefore automatically terminate a contract of employment, and the extent to which wages are payable during such an absence is determinable only by whatever condition for such contingency an employer might make with his employee. In the absence of provision in the contract of employment indicating the extent, wages are payable at the full rate during the whole of the period for which the contract continues in existence. There is nothing, however, to prevent an employer during a period of incapacity from terminating the contract, but should he so wish he must give notice of not less than the prescribed period.

No Need for Concern at this Liability

Whilst many employers to-day feel concerned at this realization of their liability, there is no necessity for them to do so as the situation is resolved by the insertion of words in, or added to, a contract, which restrict and define it.

The alternative to this is the payment of full salary until the employment is terminated by notice. By studying the periods for which staff are absent through sickness, an employer can regulate his liability in this connection, but it must be remembered that notice of dismissal is necessary before payment of salary at full rate can cease. It is not sufficient that an employer merely indicates what fresh arrangements he intends to enforce; for the terms of the employment will remain unaltered in the absence of the consent of the other party.

Even the acceptance of wages at the reduced rate by the sick employee cannot be held as acquiescence in the new arrangements.

However, so long as appropriate notice of dismissal is given, there is then no restriction on the new arrangements contemplated or desired to be effected by the employer. It may be no wages, or half wages for so long, and then no wages, but alteration of salary or termination of employment is not legally effective until such express notice has expired.

Mere stopping of wages without notice of such intention is not equivalent to dismissal.

Many factors point to the inadvisability of adopting this method of dismissal before bringing into effect new arrangements, and point to the desirability of adopting the procedure which avoids the necessity of notice of dismissal by introducing into the contract suitable words which will govern the employer's liability.

Staff Pension Schemes must be considered

The prevalence of staff pension schemes (which include a provision that membership thereof ceases upon termination of employment) provides a special reason for



A.R.P. work in progress for
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designed and constructed shelters
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Designed in standard units, these shelters are erected rapidly and economically. They can be arranged to accommodate from 50 to any number of persons.



Left is shown an interior of one of our Standard Type 2 shelters as supplied and erected for Messrs. Ford Motor Co., Ltd. This type can be rapidly made gas-tight and equipped with air filtration plant. Sanitary conveniences can be included.

Send for details of our service, which includes the preparation of complete A.R.P. schemes, supply of all materials and erection, at a low all-in cost.

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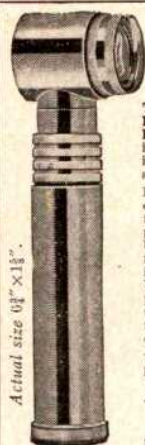
you can operate not only the electric but also the hand models. With the other hand you can at the same time follow the figures on the paper and even write. Can you realize this? Then use a Walther Calculating Machine.

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adopting a procedure in regard to sickness with pay, which permits of alteration in or non-payment of salary during incapacity, without notice of dismissal having first to be given. The position of benefits accruing to employees under the staff pension scheme, who are so dismissed and then re-engaged, might be seriously and unwittingly affected to their detriment.

Shorter Period of Dismissal Notice

The method of stipulating in the contract of employment or letter of appointment that, in the event of the employee becoming absent through sickness, salary will be payable in full only for a set scale period, according to length of service, with any subsequent payments in the absolute discretion of the employer on a purely voluntary or *ex gratia* basis, permits notice being given of any change in salary basis of less than the period normally required to terminate the employment.

If, owing to an oversight, payment was made beyond the scale period for full payment, without notifying the employee of the employer's decision in regard to payment for periods beyond that date, such payments would come under the heading of the voluntary basis. If no notice is given, payment is automatically suspended and the employee has no legal right to demand any payment.

There is, then, no question whatsoever of notice of dismissal having to be given, for the contract of employment subsists, notwithstanding what payments (if any) are made by the employer in his absolute discretion after the end of the set scale period.

It is, of course, not necessary that a set scale period be laid down, though it would be preferable by disclosing in advance what an employer is prepared to do in the event of temporary illness. But against this it can be contended that it invites an employee to absent himself for the maximum period, but the usual necessity of providing a doctor's certificate after three days should safeguard against this.

Dismissal and Subsequent Re- engagement not Necessary

Firms that have not already covered themselves in this manner can easily do so with respect to their existing employees without—as has been suggested—going to the extreme of dismissing and re-engaging their staff on contracts which cover this point.

The above remarks have been concerned solely with employees who are in receipt of an upstanding weekly or monthly wage. Where wages are payable only in respect of hours worked there is no necessity for any provision in regard to continuation of payment during illness of a temporary nature, as it is fully understood and is an established practice, particularly in federated engineering works, that hourly paid workers are not entitled to wages during such absence.

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Buying Calls for Best Management Brains

(Continued from page 11)

as a problem of management is the "quality" meeting we hold with the buyer and foremen every week.

I preside at these meetings and read aloud every complaint letter which the company has received during the past week. They are full of meat for the buying department.

Without complaints there would be no improvement, and on these "perfection" discussions the purchasing department finds itself a go-between of sales, production, and financial management.

The amateur buyer feels that he is an authority on every commodity, whereas the seasoned veteran who buys everything feels that he has much to learn, and therefore keeps in constant touch with the sales and production departments. Just as the foreman holds his subordinates accountable for a poor piece of work, so he holds the buying department responsible when material does not stand up properly. For this reason, the careful buyer wisely consults the practical men—the engineer, the metallurgists and chemists, and the inspectors—before he buys materials of any kind.

When the superintendent of any department needs new equipment he goes to the works engineer and obtains the services of his master mechanic. Together they interview sales engineers, review other installations and narrow their choice to one or two machines. Then they send in a purchase requisition card to the buyer listing the companies who handle the equipment in question with the preferred machines ticked.

Here, again, the veteran buyer accepts the preferences of "those who know." The production department is also responsible for the proper requisitioning of all productive material with the quantity specified in accordance

with the building schedule given by the management. Factory representatives are likewise sources of knowledge to the buyer. They are specialists in their line and a good salesman makes the buyer depend upon his knowledge.

With each year, methods of conducting business grow more scientific and introspective, and with each year the buying department becomes more vital.

To buying we trace increased sales and turnover, reduced expenses and overheads, and continuity of production. It is the nucleus of the business cell, the hinge upon which profit hangs. I believe that a department bearing such responsibilities demands management supervision, and in proportion to which it is given will a company prosper.

The Industrial Centre of the South

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A.R.P. In order to ensure continuity of production under all circumstances, it is essential to choose a factory site in a district of comparative safety.

SITUATION. 7 miles north of Cardiff docks. 2½ hours from London. Transport and manufacturing facilities equal to those of the best equipped industrial centres in the country.

SPECIAL FINANCIAL INDUCEMENTS. Generous contributions towards rent, rates and taxes, loans available at low interest in approved cases, and extremely low factory rentals.



For full particulars of the advantages of the Government-Assisted Treforest Trading Estate, write to Douglas A. Duncan, General Manager, South Wales and Monmouthshire Trading Estates, Ltd., 51 Treforest Trading Estate, Pontypridd, Glamorgan. Telephone: Taffs Well 86. Telegrams: "Factories, Pontypridd".

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"Industry at Welwyn" is a new and attractively produced book that tells in detail the story of Welwyn's progress. May we send you a copy?

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AA/B

These 4 Policies Built 15 New Lines

(Continued from page 16)

record card clearly indicating his purchases of each individual line for the month and, in addition, his accumulative purchases for the year as compared with the same period the previous year. The difference is clearly indicated by a plus or minus sign.

The retailer can, therefore, see at a glance not only what his immediate purchases have been during the month in question, but also the whole development of his particular trade during the period concerned.

These statistics are, at the same time, of great value to the firm, and every record card is seen by the managing director before dispatch. From these cards, appropriate advice is given to the firm's representatives where the figures indicate a falling-off of business.

The number of wholesalers over the country is limited, and applications for factors' or retailers' terms are constantly rejected.

The reason is that the existing wholesalers already cover the country efficiently, and to supply additional factors would be detrimental to their business. If a new wholesaler is supplied with, say, 500 rollers, it does not follow that Ironcrete sales will increase by this number. The effect will show in decreased sales by other established wholesalers. This, of course, will also ultimately diminish the goodwill built up.

Wholesalers are also advised of their sales of individual Ironcrete products, by advice on the lines of those sent to retailers. In addition, they are sent a comprehensive report every 12 months, along with a personal letter from the managing director.

In the latter he comments on the wholesaler's position with regard to total sales of Ironcrete products compared with the other wholesalers; and also variations in sales of individual Ironcrete lines. Besides being of help to the wholesalers in their office, these advices establish a spirit of competition among them which is of benefit to the firm.

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From 6b
softest, to
9b, hardest

Treforest Estate

(Continued from page 30)

South Wales Ports Nearer to Foreign Termini

So far as overseas trade is concerned, the South Wales ports are, in general, nearer to foreign markets than are most other British ports.

The port facilities available at Cardiff, Swansea, Barry, Port Talbot and Newport are capable of handling traffic many times in excess of that which now passes through them.

Every type of merchandise can be handled—from locomotives to powder puffs.

Country-Wide Distribution By Canal Possible

For those firms whose goods can be sent with less need for speedy delivery there is available that very cheap means of transport, the inland waterway. The Severn waterway can carry your goods to the heart of Britain—Birmingham. Further than that, if you like, as the canal system extends to all the main areas of the country.

If you are in a great hurry to get a consignment of goods to a customer there are air services operating from the Cardiff municipal aerodrome to Birmingham, Bradford, Brighton, Glasgow, Isle of Man, Jersey, Leeds, Liverpool, Manchester, Plymouth, Portsmouth, Southampton, Belfast, etc.

Process Water Supplied at 3d. per 1,000 Gallons

As an example of water, power and gas supplies let us look at the Treforest estate facilities. Process water, for example, low pressure settled and clarified but unfiltered, is supplied from 3d. per 1,000 gallons. The price of supply, of course, depends on consumption. Similarly, drinking water is supplied from 6½d. per thousand gallons, the price depending on consumption.

The electricity supply is unlimited. The South Wales Power Supply company, for example, will soon be called upon to supply about 200,000,000 units a year extra by a firm which has just taken a 40-acre site near Cardiff. The company can take this extra load without difficulty.

Here are the charges for power supplied to factories on the Treforest estate. *Small power*: A fixed charge of £4 10s. per kW. of maximum demand per annum, plus a running charge per unit consumed as follows:

For demands up to 10 kW. 0.5d. per unit;

For demands over 10 kW. and up to 30 kW. 0.35d. per unit.

Large Power (for demands exceeding 30 kW.): A fixed charge of £4 5s. per kW. of maximum demand per annum, plus a running charge of 0.26d. per unit consumed.

If needed, high tension supply at 11,000 volts is available.

For advertising, display lighting, flood lighting, water heating, etc., special rates are available if the power is used between certain hours.

LAMSON

A.R.P. AIR FILTRATION UNITS

To comply with Civil Defence and Home Office requirements

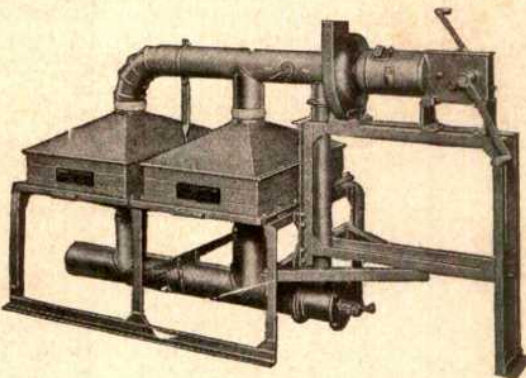
Lamson Air-Filtration Units are made in various sizes to suit Shelters for 25, 50, 75 or more persons.

They provide the stipulated amount of fresh air per person, and can be operated comfortably by hand if Electric Supply fails.

A simple by-pass arrangement brings filters into circuit when gas is known or suspected to be about. The filters de-contaminate all known war gases.

The provision of an adequate Ventilating Plant reduces the initial cost of Shelter accommodation because by Home Office regulations a greater number of persons can be accommodated in Ventilated Shelters.

We are ready to collaborate with engineers, builders and contractors in the installation of these simple but highly efficient units.



LAMSON ENGINEERING CO., LTD.

SUCCESSORS TO LAMSON STORE SERVICE CO. LTD. & LAMSON PNEUMATIC TUBE CO. LTD.

132, Cheapside, London, E.C.2.

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Unlimited Gas Available from 6½d. a Therm

Gas is also available in unlimited volume. The cheap coal of South Wales means abundant and cheap gas. The price per therm to industrial users at Treforest is from 6½d. Naturally, special quotations can be obtained for exceptional demands.

On the estate superheated steam for process and heating purposes is also supplied. Pressure is about 350 lb. per square inch. Medium and large consumers are supplied under a two-part

tariff by means of which, for example, a 24-hour supply costs about 1s. 10d. per 1,000 lb. Small users are charged at a flat rate.

Loans Made for Plant and Working Capital

There are substantial financial advantages in locating at Treforest or elsewhere on sites controlled by the South Wales and Monmouthshire Trading Estates, Ltd. The Commissioner for Special Areas, for example, can give financial concessions to manufacturers who locate on the estate or one of the

Reveals Secret of Personal Influence

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1000 free character delineations

"The wonderful power of Personal Influence. Magnetism, Fascination, Mind-Control, call it what you will, can be acquired by everyone, no matter how unattractive or unsuccessful."

says Mr. Elmer E. Knowles, author of the new book: "The Key to the Development of the Inner Forces."

The book lays bare many astounding facts concerning the practices of the Eastern Yogi and explains a unique system for the development of Personal Magnetism, Hypnotic and Telepathic powers, Memory, Concentration and Will-Power. Count H. Csaky-Pallavicini writes: "Everyone in the world should have your simple system."

The book shows how these unseen forces are being used all over the world and how thousands have developed powers which they little dreamed they possessed.

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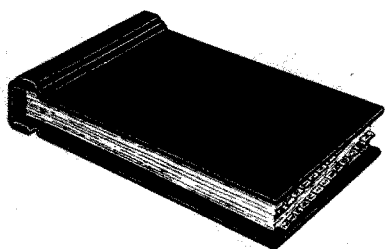
"I want power of mind,
Force and strength in my look,
Please read my character,
And send me your book."

Send your full name and address plainly printed to: PSYCHOLOGY FOUNDATION, S.A. (Free Service 734), rue de Londres, 18, Brussels, Belgium. Enclose 4d. stamps to cover cost of mailing. Postage on your letter to Belgium is 2½d.

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RECORD DELAY?

Can your records be referred to quickly? Or have you to waste precious minutes?

"Robin" Looseleaf Books save recording time. Entries are quickly made and referred to. Leaves can be inserted or removed in a moment. Compact and durable, economical to install, and easy to use.

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company's other sites. The Special Areas Reconstruction Association, Ltd., advances loans to buy plant and to provide working capital to approved applicants. The interest rates are low.

The extent and conditions of aid are, of course, dependent on individual cases. An example quoted here might be misleading. Any manufacturer interested in the opportunity provided by this financial help should write in the first instance to: The General Manager, South Wales and Monmouthshire Trading Estates, Ltd., Treforest.

Factories Rented from 6½d. a Square Foot

The low rentals of the factories constitute a saving in overheads. Factory and land complete with forecourts, paved yards, and so on, can be rented from 6½d. per square foot. Another saving comes from the low interest rates on money advanced by the authorities, from the 75 per cent rebate on rates (allowed under the De-Rating Acts) and the low premium rates obtainable on insurances. Although standard insurance tariffs are in operation for property on the trading estate, wide factory spacing and solid construction keep risks at a minimum. That is why favourable rates are obtainable.

If desired, factories on the estate and on other approved sites elsewhere in the area are built to manufacturer's individual requirements. Standard factories may be leased in whole or in part. Factories are built equipped with offices, lavatories, heating and lighting installations, power and water laid on, access roads and, if required, railway sidings. Installation costs of power, water, gas, steam, sanitation, etc., are borne by the estate company.

Percentual Rent Increase Covers Special Costs

Standard factories are constructed in sizes from 6,000 to 10,000 sq. ft. (superficial floor space). They can be subdivided down to 1,250 sq. ft. Special requirements in construction do not call for immediate payment of cost. The extra expense can be covered by a percentual increase in rent. Provision is also made for expansions. Under special circumstances a free option on adjacent land for a limited period is considered.

These Amenities Provide For Executives' Needs

To executives one of the major attractions of South Wales is undoubtedly the amenities. In the cities and towns of the area there are excellent social clubs, theatres, sports clubs, museums, art galleries, concert seasons, recreation grounds, schools, training centres, etc. In the immediate neighbourhood there is country of outstanding beauty, romance and history—mountains and valleys which are among the most delightful to be found in Britain. And there is, of course, ample scope for all outdoor pastimes, such as motoring, golf, fishing, yachting, hunting, flying, mountaineering, and so on.

Buying Power of 4,000,000 Market is Going Up

For secondary industries the "doorstep" market is important. This market is 4,000,000 strong in South Wales. The centres of Cardiff, Newport, Swansea, Barry, Merthyr, Bristol, Gloucester, etc., are right at hand to any factory located in South Wales. And it is a market which is increasing in value as more industries locate there.

This is particularly true of the women's market. Until South Wales became a centre of light industry there was not a great deal of scope for girls and women to earn high wages. They could not find jobs in the mines or in the iron works. But such labour is important to the new manufacturers in the area, and the Welsh women are taking their opportunities. Hundreds of them are earning £3 and more a week to-day. That is one reason why the sales of cosmetics, women's clothing, chocolates, etc., are rising in the area. Many firms have been surprised at the strength of this trend during the past few months.

Results will be better soon. Scores of the new factories in South Wales are as yet being built; many that are built have only just started production. Each month will add to the numbers of the "new rich" in Wales—the young women.

Men, Too, Are Finding New Work To-day

In addition to this outstanding trend which reveals daughters earning more now than their fathers and brothers do in a full week's work in the coal pits, there is the effect of reviving activity in the iron and steel industries. Some thousands are being given work by and through the new £10,000,000 plant at Ebbw Vale. That is now in production. And recently nearly 30 tinplate works, mostly around Swansea, have resumed part or full production.

There are, too, several big new factories shortly coming into operation near Cardiff and Swansea and in some of the valleys. These will give employment almost solely to men.

This is A Market for The Low Price Unit

All this means that Wales is a rising market. If conditions continue to improve and there is need for greater volume of employment in the coalfields, South Wales will become a very prosperous market. Under any circumstances, it is certainly worth developing, for the Welsh are notoriously good spenders. But concentrate on low-price units.

The market is essentially one of industrial workers who do not have much "free money." When they have paid rent and H.P. payments on furniture, radio, bicycles, clothes, etc., bought their beer and tobacco and gone to the pictures, they have not much for etceteras, even when working full time and at good rates of pay.

"RIGHT TO A THOUSANDTH OF AN INCH!"

By THOMAS DIXON

THE amazing accuracy of modern machinery is one of the marvels of the age. Processes in which an error of a thousandth of an inch, or even less, would be regarded as intolerable are quite common. The micrometer gauge has given the craftsman an accuracy of control which is nothing less than wonderful.

Accuracy of operation is perhaps the greatest of all time savers. When all the parts are exact, not only is endless time saved in the process of assembly but the finished machine is almost certain to be satisfactory and efficient. It is accuracy in the manufacture of components that has made the "popular" motor-car a possibility: the parts are cut to such absolute precision that they can be fitted swiftly and easily together without the vast amount of hand finishing that sends manufacturing costs to a high level. It is this extreme precision that has made the cheap and efficient motor-car of to-day a commercial possibility.

Accuracy of operation is equally important in every other branch of business. An error of a penny may give the bookkeeper a weary search before he finds the mistake. An error in a letter may start a chain of mistakes that will cause almost unending delay and expense before it can be rectified. Just as a lie that gets a good start can never be overtaken, so a mistake that slips by unnoticed may have consequences of the most disastrous kind.

To cut out a superfluous operation in any process is, naturally, to remove one risk of error. That risk, of course, cannot be eliminated entirely, but we can do a great deal to reduce it to a minimum; and anything that will help to do so is well worth doing.

In the handling of business correspondence by ordinary methods the chances of error are manifold.

Most correspondence nowadays is dictated, and the first possibility of mistake lies with the person dictating. That can never be wholly eliminated. We are all liable to make mistakes.

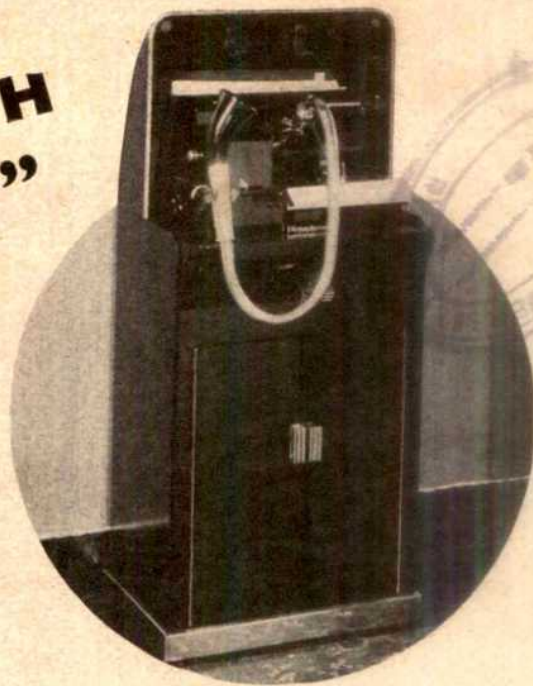
The shorthand writer taking the dictation is fallible to a far greater degree. She may mishear, or fail to hear, a word: she may write a faulty shorthand outline: she may misread her notes (or be unable to read them), and she may, particularly when figures are concerned, make a serious typing slip. Any of these errors may be made by even the most expert.

It is a great safeguard against error to cut out a superfluous process, and that is exactly the function of the dictating machine. *It cuts out the entirely superfluous process of writing shorthand* and thereby removes the most fertile source of mistakes in correspondence.

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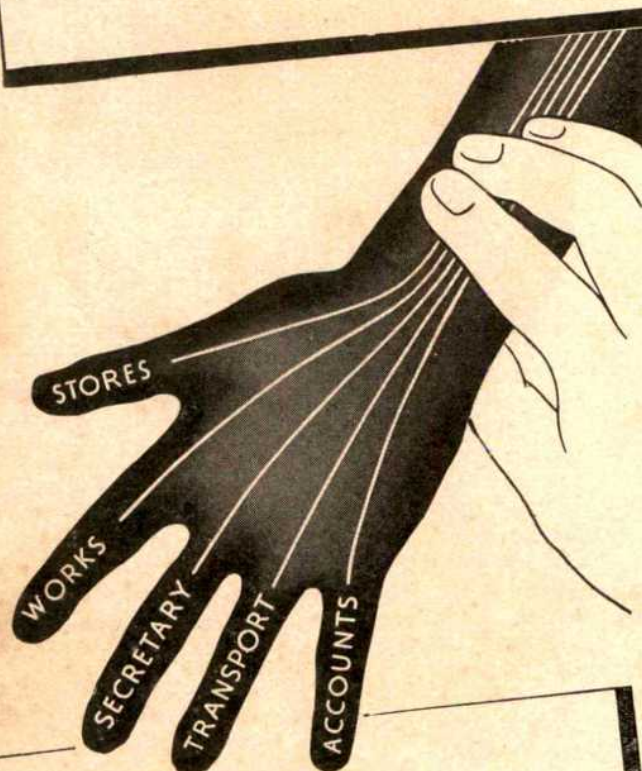
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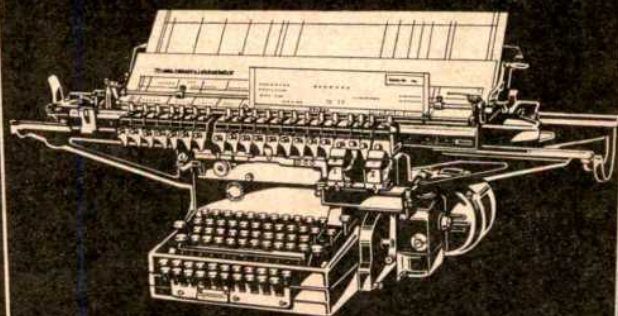
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JULY, 1939

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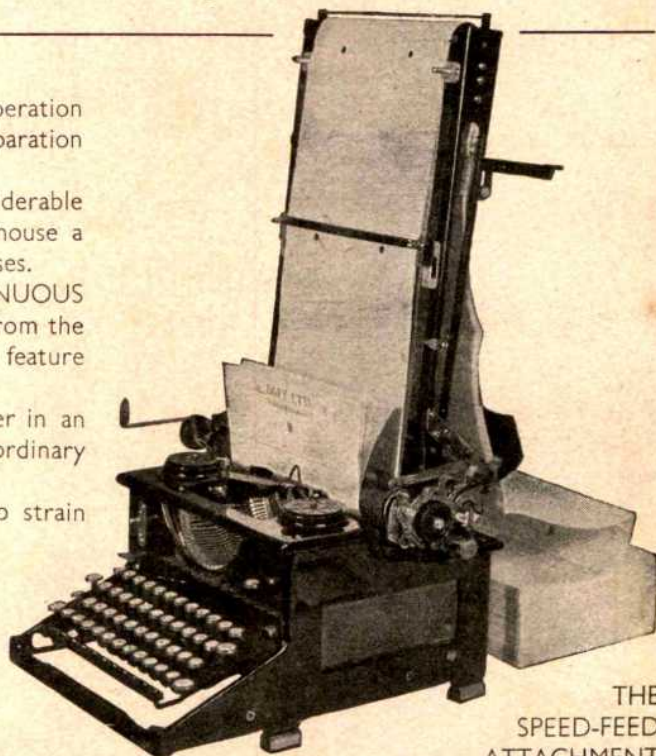
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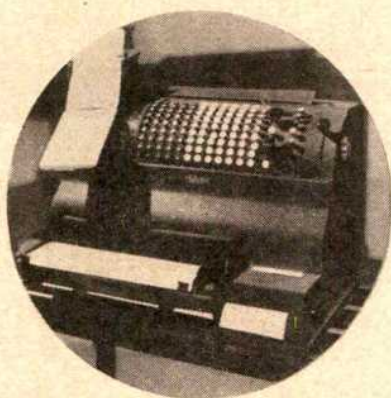
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There aren't any **'On-the-Spot' Solutions** **for these Labour Problems**

By The EDITORS

MANY manufacturers are finding the labour situation difficult: but it is going to be even more difficult in the future.

In this paper we have, from time to time, indicated how manufacturing concerns can temporize with this or that plan to ease themselves over immediately difficult situations.

For example we have urged that no skilled men should be wasted on semi-skilled jobs. This may sound like a piece of advice too elementary to offer an intelligent employer. We should agree that it is if we had not plenty of evidence that such a situation is by no means uncommon. We have urged that skilled workers be concentrated on skilled work, leaving the less-skilled jobs to be filled by workpeople which labour managers can more easily find.

We have, also, recommended that jobs and processes be broken down into more simple elements so that more of the work can be done by semi-skilled and unskilled hands, thus freeing as much skilled labour as possible for the really key jobs.

We have advocated the training—as far as conditions allow—of more juniors; and we have suggested—again where practicable—the introduction of female labour so that men can be released for more important work.

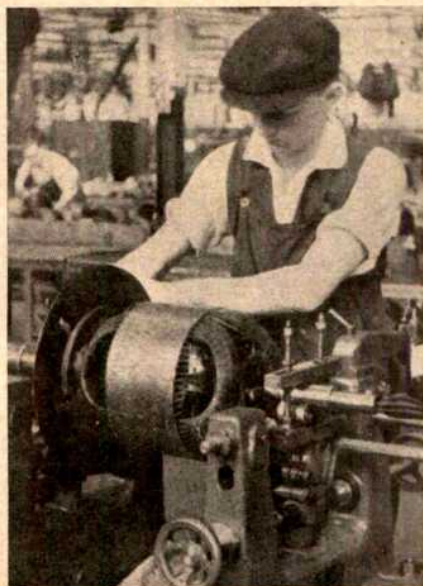
We Are Suffering Now From Past Errors

But all these things are mere temporary expedients aimed to remedy a fault that was committed years ago when the apprentice system in the technical trades was so severely curtailed.

To-day the trouble is, therefore, that

the country, as a whole, is suffering from a dearth of skilled labour and a lack of competent reserves in training. The engineers are particularly badly off in this respect, and now that the national call and normal trade recovery are making the heaviest demands on the services of these branches of industry, their straitened circumstances are being the more keenly felt.

Industrial politics do not come within our province to discuss, but we feel that recognition should be made of the tough times suffered by all ranks in practically every sphere of the engineering industry during the years that followed the Great War.



With those unhappy times in mind the unions may perhaps, not unreasonably, have exhibited a rather adamant front.

Their latest announcement, therefore—conditional agreement to "dilution"—as a contribution to the betterment of the present labour situation should be accepted as a very reasonable gesture. It is to be hoped, too, that this tentative "easing" of relationships will mark the beginning of a new era for this most vital section of the nation's industry.

To-day, therefore, we are suffering from the long-range effects of labour policy errors committed some years ago. Obviously, then, short-range, on-the-spot remedies will not avail for situations that have grown up so insidiously. The urgent thing for industry to do, therefore, is not to waste valuable time trying to find day-to-day anodynes, but to establish at once improved labour policies and methods that will result in an entirely new growth of relationship and achievement.

Such measures will take time to bear full fruit: their effect will be long-range, but it will be as inevitable as the uneasy situation to-day is the inevitable effect of shortsightedness in times gone by.

Whatever the pressure, impatience is not the quality we should indulge just now. It is quite true that manufacturers who are up against labour shortage will naturally punt around for every near-at-hand remedy or expedient they can find. But the *real* danger lies twelve months, two years, five years ahead.

This rearmament boom will not last

for ever, this artificial condition of tension will fade out. Then, unless the relationships between industry and labour are much more harmonious and scientific than they are to-day, there will arise a *really* serious question of "What now?"

The past ten years have, in fact, seen a steadily improving relationship between employers and labour. To-day, in a very great number of individual concerns this relationship is close and extremely cordial. But in industry as a whole enough has not yet been done.

Conscience, Better Guide than the Law

The immediate need, therefore, is to set about removing the many anomalies that still exist. The physical aspects of factories have been fairly well covered by the new Factories Act; "good" working conditions are thus pretty well assured to all hands. But wise employers to-day are not governed so much by Acts as by conscientious understanding of human needs. It is this latter that will do most to banish belief in that artificial gap supposedly to exist between "capital" and "labour."

In the matter of working conditions, the employer with his eye—and his heart—on the future will give more than is compelled by the Act. He will study his employees rather than the law, for in this way he *builds a business* rather than merely employing labour to do a job.

Then there are other things that have always irritated that old "sore" between capital and labour. Take big dividends as a typical example. Employees in a firm declaring a forty per cent dividend do not feel very cordial towards the management when, through illness, they lose their pay or, through temporary redundancy in a department, they are laid-off for a spell.

If, instead of such boom dividends to shareholders, some of those excess profits were devoted to a fund (call it an unemployment fund, or anything you like) for looking after such unfortunate employees until they can return again to work, that would be a wonderful power for the cementing of industrial relationships.

More Care Should be Taken of This Asset

With all the fine schemes for first-class working conditions in the factory, with all the canteens, sports grounds, medical clinics, and so forth, which are becoming part and parcel of the modern organization, the employee who loses his or her job solely through unavoidable circumstances is still an almost completely neglected factor. Yet why on earth should this be so?

A worker who has spent some years with a concern, who is trained in the ways and methods of that firm, is truly an asset that should not be lightly thrown aside. It is only common sense to suggest that such an asset should be supported through illness or temporary

"TO-DAY CERTAIN!"

Do you ever consider the effect of that little note you append, often automatically and unnecessarily, at the foot of your orders?

The manufacturer who receives the order thinks you mean it and, anxious to demonstrate that his service is as good as the next, he makes a great effort to meet your demand, even though it arrives late in the afternoon—and that usually means overtime work for someone.

The Factory Act of 1939, with its elaborate provisions and vetoes concerning the employment of female labour, has set the manufacturer a really perplexing task. He is allowed a hundred hours overtime for each shop per year—but (and there's the rub), if only one person is kept for an hour to add the finishing touch to your order, it is regarded officially as an hour's overtime from the allotment for the whole department.

It is easy to appreciate the likely effect of this avoidable overtime later in the year when the volume of autumn orders necessitates working long hours for several months.

Many manufacturers may discover then that a large proportion of their allotment has been dissipated in trivial jobs which were not even urgent, if the true facts were known. Skilled labour will not be available and infringement of the Act would be followed by heavy penalties.

It has always been difficult to cope with the rush between September and Christmas, but this year—even if the whole annual overtime allotment be reserved till then, it will be a greater problem than ever.

So may we ask that during these next few less busy months, those who are preparing to add to their orders that little footnote, "To-day Certain," will reflect upon the possible result.

If the order is important and really urgent, well and good. That cannot be avoided.

If it is not, please omit those two devastating words, in the interests of yourself, the workers and employers and, not least, of your customers.

Think, therefore, before you issue that 'rush' instruction. The above notice is an appeal to manufacturers made by one of the industrial magazines.

lay-off. That is purely the business angle of it. The human consideration is one of equally—if not of greater—concern if higher ideals and better relationships are to be reached.

This factor would, no doubt, be more fully appreciated if the true cost of finding and training new workpeople was understood.

The cost of highly paid executives to find a new employee, the cost of trained workers' time to show a new-comer his

job, the disturbance to work that *must* accompany the installation of a fresh element, and the fact that he cannot, for at least some period of time, prove fully productive, are things that do not show up positively and at once as cash items in a firm's overheads. If they did thus show up, there would certainly not be so much promiscuous hiring and firing. Hiring would be given a lot—yes, a *lot* more careful study, and firing would be a thing to which the very top management would give its attention. And in the meantime the hired employee would be treated as the valuable asset he undoubtedly is.

Some firms imagine they are doing these things. One very large firm we know even makes publicity out of the way in which its sick employees are looked after. A woman supervisor from the firm's welfare department visits the invalids in their homes. Yes, she certainly does. But ask any of the staff about this "solicitude." They hate that woman worse than a rattlesnake. They refer to her as Mrs. Sherlock Holmes. You can draw your own conclusions from that; but it seemed to us that whatever was the management's original intention in sending someone to visit its sick employees, ostensibly "to see if they have got everything they needed," the actual result of the plan was to create a feeling of suspicion and resentment.

The management's intention in this case may have been right while the type of supervisor selected was wrong; we do not know.

This is the Policy to Follow Now

We are not taking sides, anyway, but we cite this case to emphasize the need, in all matters of personnel management, to be actuated by the real *spirit* of helpful service and not to be concerned only with the outward appearance of a policy.

It is only in this way that labour problems of the immediate future will be resolved. Temporary expedients may seem to tide over some of the particular difficulties of the moment, but they do not solve real labour problems.

What industry must do *now* is, as we say, banish all possible anomalies, institute far better and more comprehensive systems of trainees, get down to proper methods of grading labour, go in for systems of training foremen, finance unemployment (or similar) funds from excess profits, go in more for actual profit-sharing schemes, and, most important of all, establish between management and staff relationships that are educative and cordial in the fullest *spirit* of the meaning.

All this, of course, will take time. It took time to get industry into the pass it is in now, so he is a superoptimist who expects to get out of it at one jump.

These long-range policies, however, are essential, and they are sound. One year, three years, five years from now, you will see.

SIX

Questions for Management

1. At what points in your production do the greatest wastes occur?
2. Have you any special methods for keeping supervision focussed on these points?
3. How do you decide optimum output for machines and operators?
4. How do you decide when new machines may be profitably introduced to supplant old ones?
5. Have you got a wage payment and incentive system that is producing best possible results at the present time?
6. Are all your clerical departments as efficiently "cost-controlled" as those in your factory?

Can you give COMPLETELY satisfactory answers to the questions? If not, our Administration Consultant can help you to improve your business at these points. The Editor will put you in touch with him.

Management Causerie

Of The Month

One Immediate Benefit From A.R.P.

THERE is still something in the old adage: "It is an ill wind . . ." etc. This A.R.P. breeze, expensive as it is from some points of view, is indeed searching into a few musty corners.

In the campaign to safeguard essential business records and documents, for example, many firms are discovering that for the last hundred years or so they have been giving filing and other storage space to twice or three times as many documents as it is really necessary to keep.

As a preliminary to safeguarding records against war damage, therefore, executives are laying down the following injunctions:

1. Review all documents in files, strong-rooms and "glory holes." Scrap everything found to be unnecessary.
2. Fix the policy for automatically reviewing documents at given dates, with a view to scrapping.
3. Reduce the size of unnecessarily large documents (i.e., charts, plans, office stationery, etc.).
4. Reduce the number of records ordinarily in use for routine work (most firms can do something here).
5. Inaugurate a less conservative policy about scrapping documents generally.
6. Forbid the "private" holding (by individuals) of any documents in desks, drawers or other unofficial cubby holes.

Having made a clean sweep like that, it will be far easier to get at those vital records which need to be duplicated (by photo or any of the well-known processes. See *BUSINESS*, page 32, May issue) for storage in safe places.

It is amazing, too, what space and equipment can be released, and how much work can be saved, by avoiding to hoard so much paper.

What Will You Do Without Petrol?

WITH the subject of shelters and other immediate A.R.P. measures pretty well dominating our minds, the important matter of road transport in the event of an outbreak of hostilities does not seem to be talked about by business men as much as it should be.

It is not sufficiently appreciated that, in war, petrol may be unobtainable.

Many of the big firms do realize this and are doing something about it. One company, for example, has in construction a fleet of 60 accumulator-driven vehicles, and a special power plant for

battery charging and emergency factory lighting.

Other companies are planning to use steam vehicles, and still others are getting advice about the use of producer gas and coal gas. One firm has already converted one of its petrol lorries to producer gas and has tried it out. The facts and figures thus obtained are being used to estimate the performance of the whole fleet on producer gas. This is an excellent piece of forward research work that may well stand this firm in very good stead.

Should Your Staff Have Sight Tests?

MANY firms have recently been carrying out large-scale sight-testing among their employees. In every case the result has been increased production, greater accuracy in work and fewer accidents. Total economies in some factories are equivalent to 8 per cent increase in output.

Management, searching to increase efficiency and reduce costs, should find sight-testing a worth-while "expense." Experts estimate that about 45 per cent of industrial employees suffer from vision defects which could be corrected by wearing glasses.

As every executive realizes, imperfect sight is a cause of wastage, bad and slow work, accidents and absenteeism. That is why progressive companies are following this sight-testing policy to-day.

Don't Hire 'Temperament'

HUMAN temperament is a funny thing. Its manifestations can have far-reaching effects—in places, too, other than on the film set

By

THE EDITORS

or in the top-line executive offices of business.

Some idea of what "temperament" can do in the average works was indicated recently when a big firm made a test.

In this concern, which has over 1,000 bench employees, there exists a system of personnel reports whereby foremen and department heads record, every month, their "rating" of each employee.

These reports, over a period of 12 months, were closely analysed, and it was found that out of all criticisms or complaints levelled against employees *only 10 per cent related directly and solely to bad or inefficient work.* The rest had to do with temperamental lapses and upsets in all their wide variety.

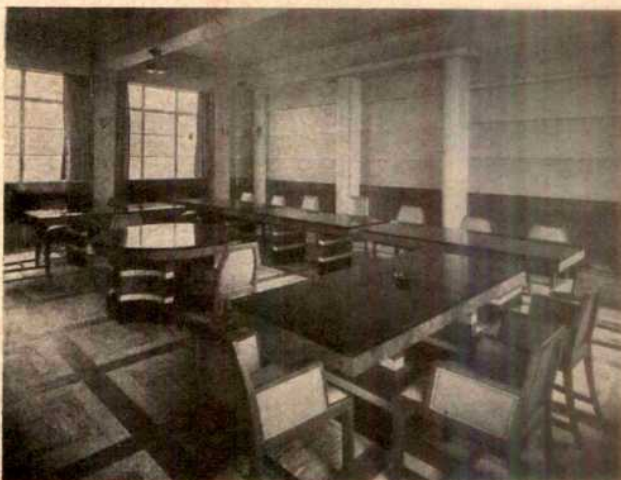
While, therefore, in this concern there were obviously very few bad workers—in the sense of being actually inefficient or clumsy exponents—output was nevertheless indirectly jeopardized by those frictions of what might be called a "social" character: incompatibility, restlessness, political outlook, jealousy, illness complexes, and so on.

The firm in which the above test was carried out was in no way exceptional. The obvious inference therefore is that, for a large works especially, purely manual or ability tests are not sufficient when engaging employees.

The advantage of skill at the bench can be seriously—if not entirely—offset by a temperament that induces an area of upset around it.

Golden rule, therefore: When engaging a rank-and-file employee try to find out if he is a good *man*, as well as a competent worker.

In this conference room concealed lighting and a special acoustic ceiling are features. The colour scheme, too: pastel green, silver and primrose is at the same time modern and restful. Around the lower part of the walls is a flush dado of walnut grained Bakelite laminated material, with a black Bakelite laminated capping



Why This 'Suggestion' Scheme Never Flags

By F. T. POULTON. From an Interview with
JOSEPH LUCAS, LTD., Birmingham



No employee can miss the suggestion box, there is one at each factory entrance, 24 in all. The record card shows everyone the position for the period

It is failure to get this sustained, active interest from the workpeople that causes ninety-nine per cent of suggestion scheme deaths.

When, therefore, a suggestion scheme has been running for sixteen years, expanding steadily in scope and value, as it has been in the Joseph Lucas, Ltd., organization, the reasons for such success are worth examining.

Actually, of course, the reasons are many. Administration of the scheme has been so well framed that every factor of it contributes its quota to the general success.

But among the broad basic reasons one of the most outstanding is undoubtedly the "authoritativeness" behind the scheme. It is sponsored

by a Judging Committee, with the managing director as final authority to decide "yes" or "no" to the recommended awards put before him.

This committee comprises eleven delegates: five representing the management and five representing the works—one from each of the five main works groups and a secretary.

No Suspicion of Jealousy Ever Arises

Another barrier to the success of the average suggestion box scheme is fear on the part of workpeople that suggestions made and submitted to the management may arouse the jealousy of foremen or charge-hands.

In the Lucas scheme this fear does not exist. Wages are calculated on a special system, operating, of course, on a basis of results. Thus, from the monetary standpoint alone, everybody in the section concerned—including foremen or charge-hands—benefits materially from any improvement introduced. No foreman, therefore, is going to stop anybody from suggesting any possible improvement that will reduce unit costs and/or increase the rate of output.

Nevertheless, any employee putting forward a suggestion can, if he wishes, preserve absolute anonymity. He merely has to note the wish on his entry-form; the secretary of the Judging Committee scrupulously observes the injunction.

At this point, too, it should be mentioned (Read on to page 12)

LUCAS WORKPEOPLE'S SUGGESTION SCHEME		BOX
		March 20th, 1939.
WEEKLY RECORD OF SUGGESTIONS		
RECEIVED		
Mar. 20th.	B529 B534 B54	
	B532 B536	
BEING INVESTIGATED		
	B143 B497 B515 B54 R48 B159 B182	
	B343 B468 B520	B161 B165
	B362 B502 B524	B168
	B405 B506 B526	B176
	B430 B511 B527	B178
	B434 B512	B181
REPLIES READY		
	B220 B412 B478 B514 B56 B53	
	B293 B437 B479	
	B314 B444 B504	
	B409 B447 B507	
	B410 B477 B513	
Replies may be obtained from:-		
Mr. Gawley, Shaftmoor Lane.		
" Beaumont, G.H.S.		
" Anderson, Rocky Lane.		
AWARDS amounting to £30.10.0 are amongst these replies.		
		<i>Chaplin</i> SECRETARY SUGGESTIONS COMMITTEE

THE number of firms every year that start a Suggestion Box scheme is very high. Unfortunately, however, the mortality rate among these schemes is nearly as high as their birth rate.

The reason for this lies not in any fault or incapacity of suggestion schemes, *per se*, but in the methods of running them.

To have the slightest chance of healthy life, any proposed suggestion scheme must first and foremost be thoroughly sold to the staff. That is, the personnel must be so informed of its aims, objects and methods of working that they naturally become enthusiastic to further its ends.

Important as it is, however, this initial move, no matter how well put over, will be just so much wasted energy unless it is backed up by a policy that will sustain a high pitch of interest and enthusiasm for the scheme.

and actively controlled by "the chief" himself, joint managing director Mr. Oliver Lucas.

The importance of this point, both psychologically and practically, cannot be over-estimated.

The head of the firm's active participation holds the staff's enthusiasm as no other factor could. The workpeople realize that they are, through this arrangement, actually in personal touch with him and that the merit of any suggestions of theirs will come before his personal attention. Thus they feel permanently assured in their own minds that it is really worth while using their brains and that any efforts in this direction run no risk of striking a premature terminus on the desk of some less authoritative executive.

In a firm of any size the managing director, of course, cannot handle the detail of a suggestion scheme.

At Lucas, Ltd., the scheme is handled

August, 1935.

LUCAS WORKPEOPLE'S SUGGESTION SCHEME

- Here is your opportunity. The above scheme enables you to submit direct to the Management any ideas or suggestions you may have which you think might simplify our methods of production, improve our products, reduce waste or in any other way be of use to the Company.
- What to Suggest. Suggestions should contain original ideas and will be welcomed on any of the following or similar subjects:—
 - Improvements to existing Productions.
 - New Ideas and Designs.
 - Improvements in Production Methods, Machines or Tools.
 - Saving in Effort or Material.
 - Prevention of, or finding a use for, Waste.
 - Improvements in Safety Appliances.
 - Improvements in the general handling of Goods.

In any Suggestion Scheme it is important that employees should know precisely in what directions to exercise their brains and ingenuity. Lucas provide this information in booklet form; every employee gets a copy

WORKS ARBITRATION COMMITTEE

LUCAS WORKPEOPLE'S
SUGGESTION SCHEME

Date 19th June, 1938.

Suggestion No. G.1159.

To:- Mr. J. Richardson,
Check No. 1261,
Switch Gear Department.

Upon investigation your Suggestion has been found to be a good one, and it is to be adopted. The Committee has therefore recommended an award of £5.0.0. which has been approved by Mr. Oliver Lucas.

This award, together with your name, will be published in the "Lucas Sports Club News" unless you have already indicated on the Suggestion Form that you would rather your name was withheld.

The money can be collected at the Fire Office, 'D' Gate in exchange for the attached slip duly signed by you.

Secretary
Secretary,
Suggestions Committee.

Above: This letter notifies the suggestor whose idea has been accepted. Note that no red tape hampers paying out the award, the employee simply has to collect it as instructed.

Right: The three grades of refusal. Top letter goes to the suggestor whose idea, though not acceptable, is sufficiently meritorious, in conception, for an award.

Middle letter goes to the suggestor whose idea is in the next lower grade of merit. Text of the letter explains a rather interesting scheme.

Lower letter goes to the unsuccessful ones; but it finishes up on an encouraging note.

In every case of refusal full technical reasons are given why the idea cannot be accepted. This is an important point, it obviates dissatisfaction; it is educative, too.

LUCAS WORKPEOPLE'S
SUGGESTION SCHEME

Date

Suggestion No.

To:-

Upon investigation your Suggestion has been found to be a good one, but unfortunately, cannot be adopted for the following reasons:-

Award of

The Committee has, however, recommended a Merit which has been approved by Mr. Oliver Lucas.

The money can be collected at the Fire Office, 'D' Gate in exchange for the attached slip duly signed by you.

Your suggestion has been thoroughly investigated, but unfortunately, it cannot be adopted for the following reasons:-

The Committee, therefore, regrets that it cannot recommend its acceptance, but realising you have made an effort which, although unsuccessful in this instance, shows promise, they have credited you with an award under the new "Target Scheme", whereby for 4 promising attempts you may gain an award for merit of 10/-.

The number of such attempts to your credit now stands at

Your suggestion has been thoroughly investigated, but unfortunately, it cannot be adopted for the following reasons:-

The Committee, therefore, regrets that it cannot recommend an award. If, however, there are any further points regarding your suggestion which you would like to put before the Committee, please send them in writing through the Suggestion Box.

Don't be discouraged because you have not received an award this time. Keep on trying.

Secretary,
Suggestions Committee.

LUCAS WORKPEOPLE'S SUGGESTION SCHEME.

Suggestion No.
G.1681.

The accompanying suggestion has been received by the Suggestion Committee. Please give it careful consideration so that the Committee may have adequate material upon which to base their decisions before final presentation to Mr. Oliver Lucas.

As it is the Managements wish to encourage ingenious suggestions quite apart from the amount of saving, your reply should place the suggestion in one of the following categories.

(a) Ingenious. (b) Good. (c) Fairly Good. (d) Fair. (e) Poor.

A reply within 7 days is urgently requested.

A. BAYLISS.
Secretary.

Date... 29th Feb. 1939

METHODS REPORT.	DESIGNS REPORT. - DESIGNS ENGINEER	SALES REPORT. - SALES.
Category..... B	Category..... C	Category.....
The method, as outlined in the suggestion, is considered to be good, and would assist in our assemblies. Designs Dept. should be approached as we are in complete agreement with the suggestor. (Sample to hand).	The suggested change in design of the TSC34 Switch has been considered to be fairly good, and modification notes will be issued immediately.	Sales would not be affected.
Signed..... Date..... Feb 24/39	Signed..... Date..... Mar 1/39	Signed..... Date.....
(1) Estimated saving over Present Methods. £ 57 : 10 : 0	ESTIMATING REMARKS. The total estimated saving is approx. £72.10.0 per annum, but tool cost will be about £25.	FOR COMMITTEE'S USE.
(2) Is it Permanent or Temporary. Permanent.	Signed..... Date..... Mar 3rd 1939	Suggested Award £ : : Sanctioned Award £ : : Signed.....

When suggestions are received they are submitted to executives in the various departments to which the idea applies. The executives report, as shown here. This helps the judging committee to estimate the full merit of the idea

tioned that, throughout the process of judging, the committee have no idea of the identity of suggestors. Entries are referred to only by the reference numbers which appear on the suggestion forms, thus ensuring that decisions are made on merit only: no question of partiality can possibly arise.

The suggestion boxes themselves are placed inside the factory entrances—one to each gate, 24 in all. Beneath each box is a supply of special serially numbered forms arranged in pull-out fashion like telegraph-form supplies at post offices. Suggestions are written on these forms, sealed in envelopes provided and posted in the boxes.

The boxes are cleared weekly and the suggestions then go before a sub-committee (appointed from the full committee) which meets once a week. This sub-committee's job is to go carefully through all the suggestions received and to select the eligible ones for submission to the full committee which meets every two weeks.

At these full meetings final decisions are made, and accepted ideas are rated for monetary award, awards being from 10s. to a maximum of £20.

In this scheme awards are not made on a "percentage of estimated savings" basis, but on a straight assessment of merit, the deciding factor being ingenuity.

Prompt Payment is a Highly Influential Factor

Payments to successful suggestors are made within one week following the decision to award.

This prompt judgment and payment of awards is another reason for the sustained enthusiasm in the Lucas scheme.

Nothing encourages a worker so much as to have a quick decision on his voluntary efforts. If the result is a turn-down, he can get right on with another idea. If it is the other way, then of course his cash award is all the sweeter for being promptly made over.

Nobody, however patient he may be, likes to be kept waiting weeks or months before hearing the result of something he has enthusiastically contributed. It is management's dilatoriness of this sort that is another factor which speeds the breakdown of many average schemes.

Dealing with suggestions submitted by employees calls for a tremendous amount of tact. The extent to which this tact is exercised is, in fact, yet another thing which can hold or kill workers' enthusiasm for the whole idea.

When a man voluntarily puts forward to his "superiors" some special effort over and above what he is normally paid for, and on which he had probably spent much constructive thought, his sensibilities in regard to it become extremely vulnerable. A hasty or inconsiderate rebuff if his effort happens to be of no use will wound him deeply: will most likely kill his enthusiasm for all time.

Such loss to the management is serious, because the type of man *who will think constructively at all* is the

very type to whom the fullest encouragement should be given.

On the other hand, everyone who puts a suggestion forward does want a definite answer concerning it.

The Lucas plan, therefore, embodies four reply forms. The first (see illustration) is used where the suggestion is accepted and the award decided. This takes care of the successful entrants.

For the unsuccessful suggestors, however, there are three degrees of reply, as the illustrations show. Unfortunately, through lack of space here, the headings and other physical parts of these letters have had to be trimmed off, but we have reproduced the text.

The top letter goes to those people whose suggestion falls just short of practicability, but which is sufficiently meritorious, in idea, to be rewarded.

Letter number two goes to people who, though still wider of the mark, yet deserve some tangible recognition. The "Target Scheme" here is interesting. The text of the letter explains it.

The bottom letter goes to those entrants who are off the rails altogether; but it is designed, nevertheless, not to damp their enthusiasm.

It is important to note that in every case, in all three categories of refusal, the company gives full technical reasons why the suggestions cannot be accepted.

Thus, no employee is ever left dissatisfied with the manner in which his suggestion has been handled. This is a further reason for the continued success.

Another extremely popular and stimulating point about the scheme is the series of special additional awards made at the end of each year.

The first is for the most meritorious engineering suggestion; the second is for

the suggestion which gives the greatest saving.

In both these instances the original award is increased to £50. Then there is a third award which is given to the best suggestion entered by a woman employee. The original award in this case is increased to £25. These amounts are handed out, personally, by Mr. Oliver Lucas.

One of the things which is most effective in keeping employees' minds on the need to make suggestions, and on the points at which they can be made, are the inspirational posters which are kept displayed throughout the works.

The posters, produced by the firm's own publicity studio, dramatize the vital need for safety, for care of machines and tools, for cleanliness, and so on.

The Plan Definitely Helps the Firm's Progress

These, then, are the main factors which keep this suggestion plan a live and effective force among the staff. The management consider the plan to be an extremely important contribution to the progress of the company, and they attribute to it a very satisfactory figure in the form of annual cash savings and work improvement.

But the management also find the scheme valuable in still another way.

Every accepted suggestion is noted down on the appropriate employee's record-card filed in the labour department. Thus, when promotions come up for consideration, this "suggestion data" forms a useful additional guide to a man's mental and practical capacity.

Yet They Still Write This Clap-Trap

OFTEN and often in this paper we have urged abandonment of those trite, outdated clichés which passed for business letters in grandpa's day, yet from which many executives even in 1939 seem unable to break away. The accompanying example, signed by a director, came in our mail one morning last month.

We thank you for your favour of yesterday's date, regarding our _____, and have pleasure in enclosing the folder describing these _____. We hope that after you have perused same, you will favour us with your valued orders.

But in this case the sin was not only the Victorian clichés. The expressed anticipation of our "valued orders" was a quite wrong point to make. Our original letter of inquiry clearly indicated that we were seekers of information solely for journalistic purposes, and that we were not at all likely to be buyers.

Thus our friend the director not only contents himself with writing Victorian letters: he does not even write appropriate ones, for the simple reason that he

does not read correctly the inquiries he receives.

It is not suggested that business letter writers should aim at the literary immaculacy of a leader in *The Times*. Straightforward, modern English, however, does help the other fellow to know what you are writing about, especially if it is directed to the point at issue.

Had we been dictating this letter we should probably have said something like:

"Thank you for inquiring about our _____. Here is a folder which gives particulars. If there is anything more you would like to know about the product I shall be happy to tell you, either by letter or phone."

Clear and simple, is it not? Also it is more helpful: and certainly more human.

THE TREND OF TRADE Marketing—Advertising—Selling

THE BOOM: *How Big? How Long?*

THE revival is now assuming boom proportions. In five months over five hundred thousand more people have found work: if anything, the pace quickens.

Most economic writers held that boom conditions would not arrive until the autumn. Apart from Mr. Keynes, I have been almost alone in predicting this rapid improvement.

My belief was based on two facts.

The first is the peculiar set of circumstances under which mass production works. Invariably it takes longer to build special machines, set tools and jigs for a standard model, than it does to install plant for more varied work.

More Work and Higher Wages

HENCE each section of the rearmament programme has been late in coming into action when it involved mass production. When such a plant is set to work, however, it almost invariably exceeds output schedules. This means the rapid employment of more men, the payment of more wages, the production of more goods than was anticipated. In other words, mass production invariably entails a slow, difficult start, followed by a surprising outpour when the plant is in full operation.

Secondly, I was counting on what economists call the "multiplier": nor in vain. If one man gets a job in an armaments factory in Coventry, the wages which he spends will invariably give work for another man. In that case the multiplier is one.

In the case of armament workers the multiplier is probably $1\frac{1}{2}$. For they are paid high rates, making a wage above those of building, food, clothing, entertainment and other consumer industries.

The use of any modest multiplier on the labour required for the armament programme made it clear that a boom was certain this spring.

To the impetus of mass production and the multiplier can now be added that of widely spread higher wages. If these higher wages extended to all industries they would not necessarily create jobs: but wages are still painfully low in the coal and textile industries; they have risen by only 2 per cent—5 per cent in most other industries. Yet in 1938 alone in iron-smelting there was a rise of no less than 13 per cent; in public works' contracts of 7 per cent; in shipping of 6 per cent; in iron and steel 5 per cent.

Armament Programme's Influence

GIVEN the boom, the urgent questions are—how far will it go and how long will it last?

CECIL CHISHOLM, M.A. says: "Only by 10% directly, and a further 10% indirectly, is rearmament boosting our trade volume. The rest is good, solid business . . . with plenty of momentum behind it, too. Golden rule, though: However alluring those contracts for special work . . . keep a safe hold on your basic civilian markets"

This in turn clearly depends on how much of it we give to rearmament.

Last month I showed that up to March there was direct evidence that armaments were contributing only 10 per cent to employment. The gap between total employment and the Board of Trade's production index (which fails to include armament work) was roughly 10 per cent.

If the multiplier has any validity, it is clear that much more than 10 per cent of the present employment is indirectly due to armaments; probably something nearer 20 per cent.

On the other hand, all of this activity will not cease the moment that armament schedules are reduced. For a percentage of production required for consumer demands will carry on for a time on its own momentum, thanks to savings.

Yet obviously this is a dangerous situation. For any settlement in Europe would mean a drastic cutting down of all our defence programmes.

The astonishing fact is that with 20 per cent of *plus* employment we have still one-and-a-half million people unemployed.

On the other hand this means that the increase in employment has been won in the teeth of poor world conditions. There has been little or no help from any American revival. This has prevented any rise in commodity prices, has kept overseas trade dull, has reduced the ability of many foreign markets to buy our goods.

In other words, we have manufactured this boom almost on our own steam. Certainly with no help from America, none from Europe, and with no special assistance from the Empire, apart from the Ottawa agreements.

But for the Ottawa agreements our foreign trade would be in a sorry state. (It is still nearly 50 per cent below the 1929 level.) Last year the Empire was responsible for over 50 per cent of our exports.

How far the boom will go is impossible to predict under these conditions; but it should certainly give us full

employment, i.e., employment for all of the 900,000 unemployed workers, including 500,000 seasonably or normally unoccupied for a brief period, 100,000 unemployable young men, and 200,000 unemployable old men and women, 100,000 people who are kept on the registers merely to ensure their pensions.

I think we can anticipate capacity employment by the autumn and for most of the winter, unless the political situation eases.

Cure for "Dread" Psychology

HOW severe the ensuing slump would be, will depend largely on whether the United States has picked up. With steel output at 52 per cent of capacity, with car-loading still irregular, with an apparent complete lack of confidence in the capital industries and utilities, there is no immediate hope of this. Yet a change of Government in 1940, or even a change in the Government's attitude, might cure this "dread" psychology almost overnight.

The lesson of the present rearmament shows the way to the solution of the employment problem when it comes.

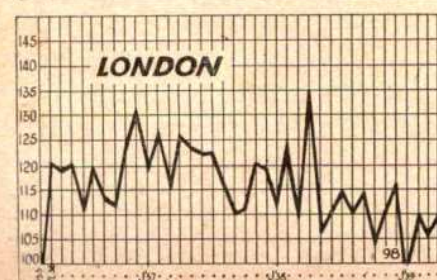
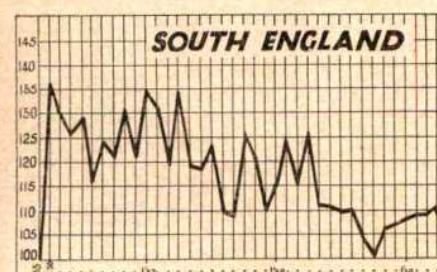
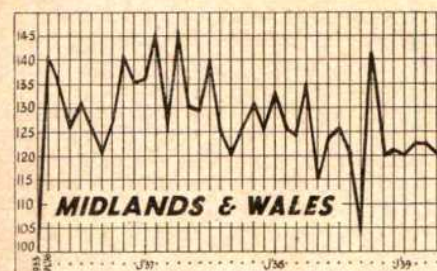
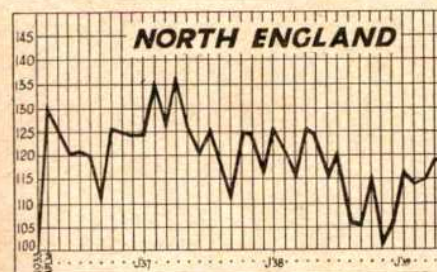
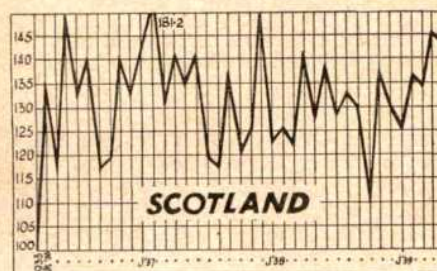
Were slump conditions to intervene, a high level of employment could only be obtained by some of the methods of the totalitarian states, i.e., by using low levels of wages combined with long hours and highly efficient methods of production.

Fortunately there is still a considerable amount of constructive work to be done in this country. The special problem of broad motor highways has never yet been adequately considered. The bungalow suburbs of many coast resorts will have to be replanned and rebuilt.

As ever, the building industry will be vital. It was the building boom in the early 'thirties which so greatly increased the level of business activity as to pull the country out of slump more quickly than any other. The rapid growth of the motor industry from 1929

REGIONAL ACTIVITY

Study these graphs. They show the level of business activity in every area of the U.K. and provide a guide to the trend of business from a long-term viewpoint.



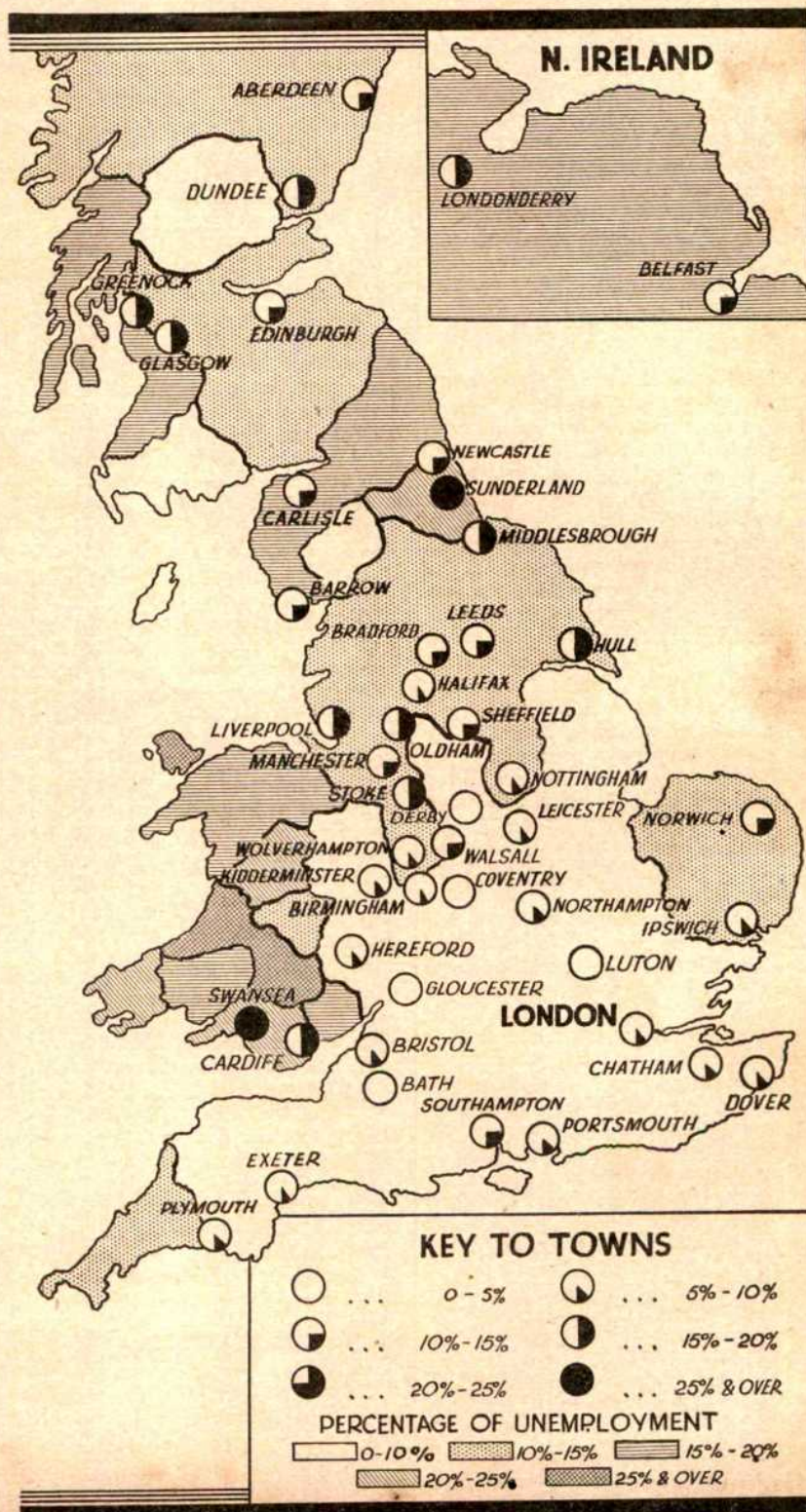
onwards has certainly done something to mitigate the slump in the first instance and to increase the general level of prosperity in the second.

To-day the boom in the armament industry is doing the same for us. It is consuming enough raw material, employing enough labour, creating enough activity to keep us on a high level of prosperity. Only by develop-

ing suitable industries one by one can future slumps in this country be avoided.

Agriculture is one of the most urgent needs. Here a reorganization has already begun. The new agreement for the railways should give us one more prosperous industry employing more men, consuming more raw materials, raising purchasing power.

EMPLOYMENT INDICATOR TO TRADE ACTIVITY



How To Forestall a Recession

ALL of the older industries are in a process of reorganizing or of being forcibly reorganized after a fashion. The combinations which the Government will apparently be compelled to force on the reluctant coal trade should help that industry. The cotton industry is on the way to a partial reorganization which, unfortunately, is concerned little with efficiency. The woollen industry is at last thinking of putting its house in order. If these great industries reorganize during the boom they should be able to contribute towards easing any ensuing recession.

The month's figures evidence boom conditions. The output of steel is now almost at 93 per cent of capacity; fortunately capacity is still rising.

The building trade remains active, although the situation is far from clear. Obviously the fall of around 50 per cent in plans passed for private houses is partly due to higher material costs, to shortage of labour and the absence of adequate insurance against war risks.

Whether a lessening of the tension will induce more private building it is impossible to say. On the whole, private building has probably reached its peak, and we must depend on public spending to keep up the level of building activity.

The motor tax has had immediate effect on the private car industry. After an increase of 10.7 per cent in the output for the first quarter of this year, sales in April were four less than in the previous year. Cars of over 10 h.p. fell at once by round 20-30 per cent, but the 8 h.p. rose by 20.8 per cent as compared with 28 per cent in the first quarter of the year. Here again it is difficult to predict how the political situation will make the public react during the next few months.

Production Costs Must Be Lowèred

ALREADY shortages of skilled men and of all sorts of materials are making business more difficult, yet everything possible must be done to secure the maximum output while the market is expanding. There are a half-million families with wage-packets instead of meagre unemployment benefit to spend. The tastes which these people form to-day may become the habits of to-morrow. Intensive efforts to lower production costs and to increase sales aggressiveness are called for in the average concern to-day.

Where Government work is keeping many machines running it is vital for private orders to be secured or retained for a proportion of the output.

Economic Revival In France

THE remarkable revival in France is already held up by heavy taxation and rising prices. As output increases, however, prices should tend to fall again, and wages should buy more. Fortunately, confidence in the Government is still complete, and by all

accounts everybody is working with a will to rehabilitate the economic and financial position of France.

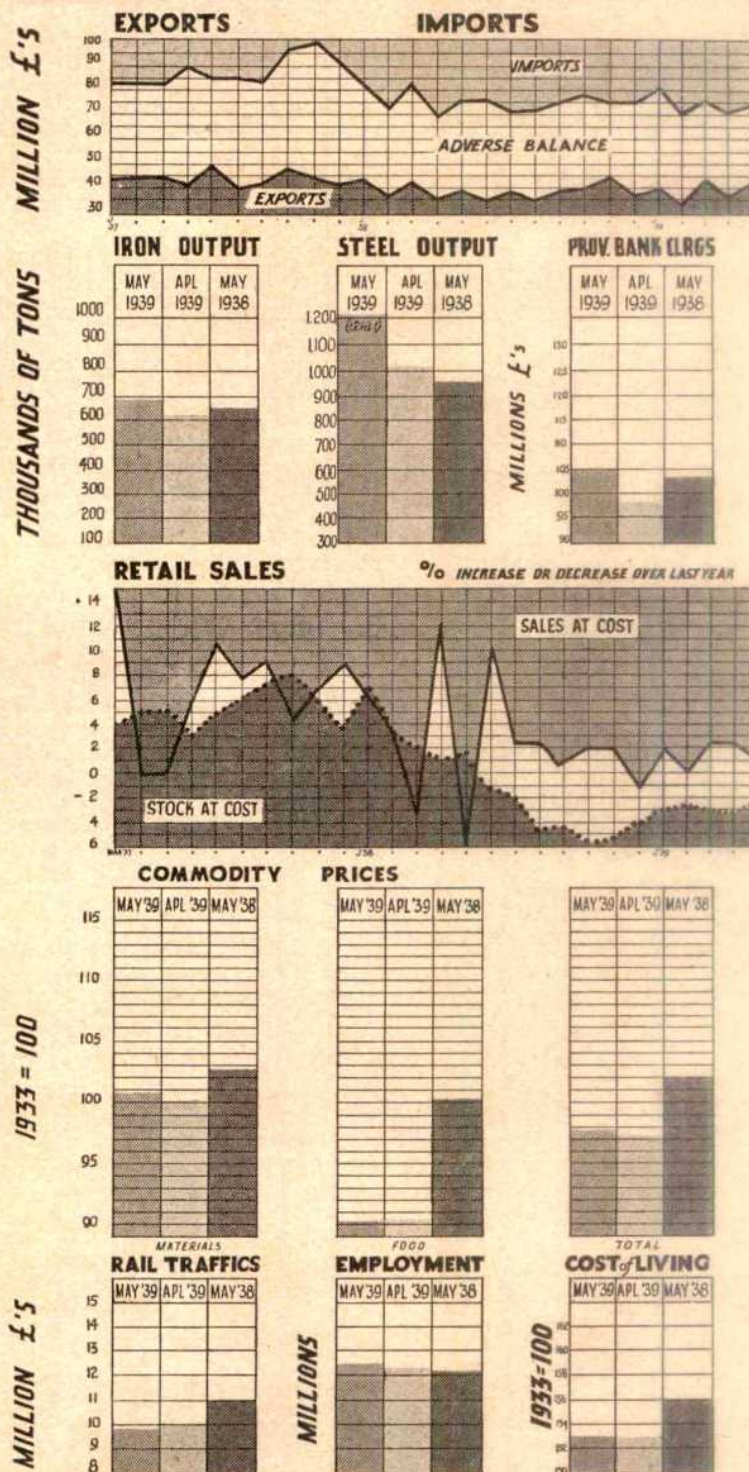
In Germany, Hitler is clearly about to stage a building boom and a motor boom as and when raw materials are available.

Mr. Colin Clark's new figures show that the purchasing power of Russia

has been rising rapidly during the last few years. It is clear that the third four-year plan is much more practical than the first or second, concentrating on localized industries to save transport, and encouraging the consumer industries. The time may be near when the Russian market will be worth very careful study.

GUIDING FACTORS IN THE TREND—

All comparisons are with similar month in last and previous month in this year



IDEAS from Other Executives . . .

1. Solving Technical Problems for Small Firms

MANY small firms need technical research made on raw materials or finished products yet cannot afford the services of highly qualified men. In more than one case we have known the local town's technical school or institute give first-class service of this kind to local firms, in return for a very modest donation.

The head of one technical school that had recently done some useful research work on clay for a local pottery said: "The students were delighted to have a real problem to solve . . . and solve it they did."

2. This WOULD Work If It Were Tried

HERE is an idea that has *not* yet been adopted by a firm on which we called recently but which would be of definite advantage to that firm.

All callers enter a waiting-room and announce their presence to a reception clerk who opens a little window in response to a push on the bell. The procedure is then to sit down and wait until a uniformed guide opens the door and

calls your name. A dozen other people may be waiting as well.

Now this is a big firm; scores of visitors call during the day, so the waiting-room is big, too. Its position, however, is cheek-by-jowl with what must be the noisiest machine shop in this particular trade.

Plenty of books are provided for the visitor, but if his appointment is a bit delayed and he becomes immersed in one of them, he may be unlucky, because, owing to the din in the machine shop, entrance of the guide cannot be heard, nor can the name when it is called.

To be lucky the visitor has therefore to keep his eyes on the door, and then he must ask the guide to shout a bit louder so the name can be heard.

Our suggested idea is not an outrageous one. It is simply the lining of this room with one of the many excellent noise-absorbing materials available at low cost to-day. It would save a lot of nerve strain.

3. Show Where Your Premises Are Located

WITH more and more factories and offices being located on by-pass roads well outside cities more use might be made (on the flaps of envelopes or the backs of letter paper) of printed maps showing the location of such premises.

For people travelling to your offices direct by car these maps would save time. Also to include on the diagrams the location of nearest "underground" and/or railway station and the bus stops, would assist the callers who use public transport services.

4. Condemned Branches Solve A.R.P. Problem

"TWO small branch factories that we were about to close down will be re-equipped to serve as 'duplicate' plants in case of war emergency," a director of a London company said. "Thus we have a solution to one of the most difficult and expensive A.R.P. problems."

5. Radio Office Phone Aids Executives' Work

IN THE CHIEF executives' offices of a firm of merchandising consultants, marketing proposals are discussed with prospective clients. After these interviews it is the practice of the executives

"The other man's way may not be yours. Nevertheless, his method may give you a new idea—or a fresh slant on an old one—which can be profitably applied in your business"

to take the points which have been considered and embody them in a memorandum which is duly sent to the prospect.

This meant that during an interview the executive concerned had, himself, to make notes of important points and then, after departure of his prospect, he had to call his secretary and dictate to her the skeleton of the memorandum while it was fresh in his mind.

This procedure has been shortened and simplified by installing an office radio communicator between executives and their secretaries. Now, the executive simply depresses a key at any point where he wants a note taken, and the speech is reproduced clearly in the secretary's office. She takes it down on the Stenotype system.

Thus the executive, without having to bother personally about taking notes, can have, if he likes, the whole interview presented to him, in typescript, almost before his client is out of the building.

With the Stenotype system any typist can transcribe another's notes. So if there is any particular urgency the Stenotype strip can be torn off as the interview is taken down, and "takes" can be given to a number of typists.

6. This Plan is Staff Health Barometer

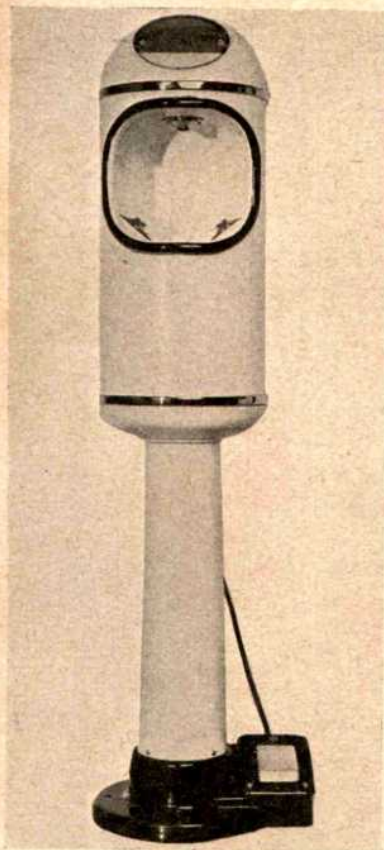
IN a Yorkshire firm all visits to the first-aid room and all applications to the firm's medical centre made by each employee are entered on the individual's record card. This enables the management to keep an eye on staff health and, through this, to alter working conditions where necessary. The plan also helps to reveal the occasional but almost inevitable "lead swinger."

7. Light-Warning Helps Control Interviews

HOWEVER well a business executive plans his day, and however tenaciously he tries to stick to his schedule, it often happens that he cannot see every caller exactly on the time arranged. Unexpected callers turn up who *must* be seen, and the best-laid programme is thrown out of gear.

Salesmen are generally the particular victims and often have to waste considerable time waiting for the executive they have called to see.

In one firm, however, a device has



In factories the provision of hand towels by the management is giving way in favour of the far more hygienic hot-air drier run off the power mains. Here is one of the latest types. One unit of current dries 80 pairs of hands

been put in to help save the time of salesmen and other callers.

In the waiting-room which adjoins the office used for interviews is a row of chairs. The back legs of these chairs fit into a special channel which carry wiring from an electrical contact device fitted to each chair.

The leads from these contacts run through to a panel in the interviewing room. The panel carries a red electric bulb corresponding to each chair in the waiting-room. The weight of a visitor sitting in a chair keeps alight the corresponding red bulb in the interviewing room.

The merit of the idea is obvious. The executive can see at any moment how many people are waiting to see him, and he can conduct his interviews accordingly.

To bring the matter to the attention of the callers themselves the following printed card is displayed prominently under the bulbs:

"These lights reveal the number of people waiting to be interviewed. As time is valuable, help us to save theirs as well as yours and our own by being to the point in all your remarks and by having your samples and materials ready for inspection. . . . Thank you."

If for any reason the executive does not want these lights to operate in respect of any caller, he has a special contact by which he can switch them off.

8. Reveals Any Unprofitable Work Hours

CLOCKING-IN is now almost universal for factory staffs. But once the staff has clocked-on it is usually left to foremen to see that actual work starts without delay.

A long, slow start up to full speed twice a day, and a premature slackening down to knock-off at the appointed times may lose, in the aggregate, many hours of paid-for time per week.

To combat this, firms are now using self-recording charts fixed to the main power source, since load on the power is a fairly good indication of work being done. Where individual drive is used on machines, special locked recorders chart the true tale about times of actual work. Management thus has a control of the time it pays for.

9. Don't Share This Sixty-Million Loss

DURING the summer wise business men look over their organizations and do any tightening up that may be needed to meet the extra pressure of the coming autumn and winter seasons.

Here, therefore, is a tip for firms who use direct mail approach methods. To them we would say:

Remember that some 60,000,000 letters go into the Post Office's dead letter department every year and that the bulk of this enormous loss is due to

out-of-date mailing lists and improperly addressed envelopes.

You may not know how much of this loss was yours last year, but a check-over from the latest editions of directories will safeguard you against loss this year.

You have about two months for this checking, as you should be all squared up by September 1.

10. This Special Telephonist Builds Goodwill

TELEPHONE annoyance is saved to customers who ring up this firm of manufacturers. Most customers, when they ring, naturally like to speak to the salesman with whom they deal; but salesmen are out of the office most of the day. This firm has therefore appointed a full-time telephonist to deal solely with customers' calls.

This telephonist has a little office on her own; the switchboard operator, on learning that a caller needs to speak to a salesman, switches him through to this special telephonist.

Now every salesman is under the strictest injunction to keep this telephonist fully informed of his movements: when he is in; when he goes out; when

he will be back, and so on. To all phone inquiries, therefore, this girl is able to give the fullest information, to take messages, to see that the salesmen concerned respond to them, etc.

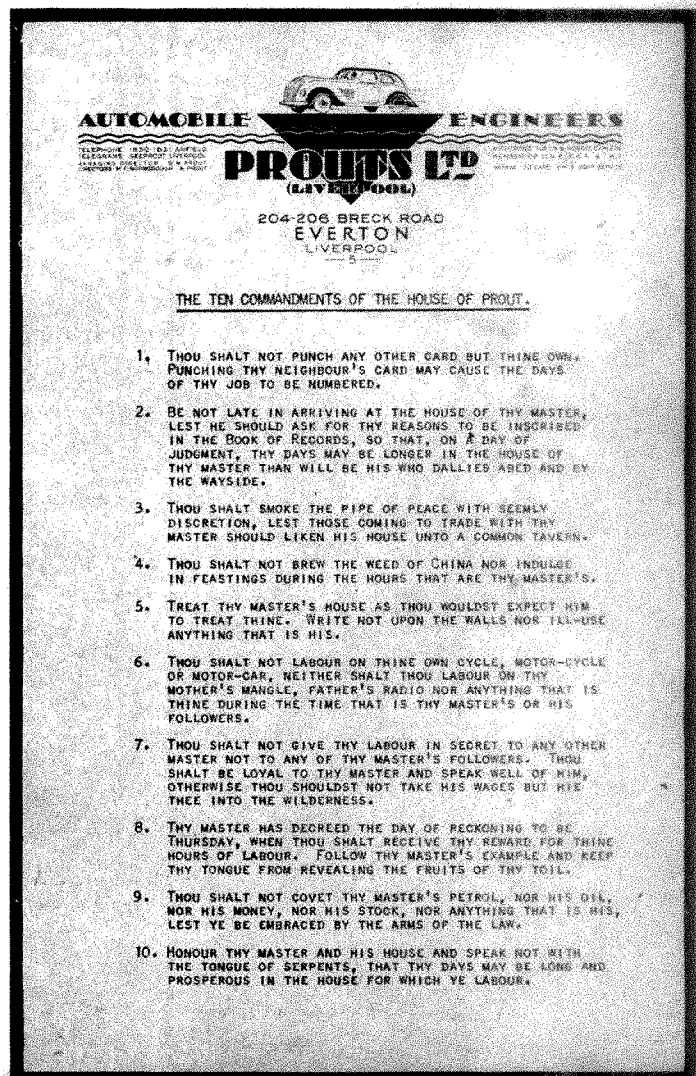
With more than twenty-five salesmen on the London staff this is indeed a full-time job, but the girl, specially selected for her "telephone personality," has enormously increased the firm's goodwill and cemented the salesmen's association with their customers.

11. Another Plan to Find the Thinkers

ELSEWHERE in this issue we tell you how effective is the suggestion-box plan in the Joseph Lucas, Ltd., organization. But some executives hold that the onus of thinking up subjects on which suggestions might be made should not rest on the employees. That is too slow, they say. Average employees have not enough initiative, they contend, to think up sufficient worth-while ideas. In one firm, at any rate, the management takes the initiative and each month posts up on the works notice board a short list of subjects on which suggestions would be welcome. Report is that response and results are very good indeed.

This is how Prouts bring to the notice of new employees the 'Rules of the House': which rules, incidentally, were drawn up by a management that understands the frailties of human nature.

Prouts, one of the best known and progressive firms of car and service engineers in the North, are justly proud of the fine relationship developed between controlling executives and all ranks of the staff



AUTOMOBILE ENGINEERS

PROUTS LTD
(LIMITED)

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EVERTON
LIVERPOOL

THE TEN COMMANDMENTS OF THE HOUSE OF PROUT.

1. THOU SHALT NOT PUNCH ANY OTHER CARD BUT THINE OWN. PUNCHING THY NEIGHBOUR'S CARD MAY CAUSE THE DAYS OF THY JOB TO BE NUMBERED.
2. BE NOT LATE IN ARRIVING AT THE HOUSE OF THY MASTER, LEST HE SHOULD ASK FOR THY REASONS TO BE INSCRIBED IN THE BOOK OF RECORDS, SO THAT, ON A DAY OF JUDGMENT, THY DAYS MAY BE LUNGER IN THE HOUSE OF THY MASTER THAN WILL BE HIS WHO DALLIES AROUND BY THE WAYSIDE.
3. THOU SHALT SMOKE THE PIPE OF PEACE WITH SEEMLY DISCRETION, LEST THOSE COMING TO TRADE WITH THY MASTER SHOULD LIKEN HIS HOUSE UNTO A COMMON TAVERN.
4. THOU SHALT NOT BREW THE WEED OF CHINA NOR INDULGE IN FEASTINGS DURING THE HOURS THAT ARE THY MASTER'S.
5. TREAT THY MASTER'S HOUSE AS THOU WOULDST EXPECT HIM TO TREAT THINE. WRITE NOT UPON THE WALLS NOR TALK USE ANYTHING THAT IS HIS.
6. THOU SHALT NOT LABOUR ON THINE OWN CYCLE, MOTOR-CYCLE OR MOTOR-CAR, NEITHER SHALT THOU LABOUR ON THY MOTHER'S MANGLE, FATHER'S RADIO NOR ANYTHING THAT IS THINE DURING THE TIME THAT IS THY MASTER'S OR HIS FOLLOWERS.
7. THOU SHALT NOT GIVE THY LABOUR IN SECRET TO ANY OTHER MASTER NOT TO ANY OF THY MASTER'S FOLLOWERS. THOU SHALT BE LOYAL TO THY MASTER AND SPEAK WELL OF HIM, OTHERWISE THOU SHOULDST NOT TAKE HIS WAGES BUT HIE THEE INTO THE WILDERNESS.
8. THY MASTER HAS DECREED THE DAY OF RECKONING TO BE THURSDAY, WHEN THOU SHALT RECEIVE THY REWARD FOR THINE HOURS OF LABOUR. FOLLOW THY MASTER'S EXAMPLE AND KEEP THY TONGUE FROM REVEALING THE FRUITS OF THY TOIL.
9. THOU SHALT NOT COVET THY MASTER'S PETROL, NOR HIS OIL, NOR HIS MONEY, NOR HIS STOCK, NOR ANYTHING THAT IS HIS, LEST YE BE EMBRACED BY THE ARMS OF THE LAW.
10. HONOUR THY MASTER AND HIS HOUSE AND SPEAK NOT WITH THE TONGUE OF SERPENTS. THAT THY DAYS MAY BE LONG AND PROSPEROUS IN THE HOUSE FOR WHICH YE LABOUR.

Here are Some of the Busy Spots this Month

Lancashire

IN the past few years more than 200 Tex-cotton mills have been converted to produce other lines: foodstuffs, footwear, chemicals, scientific instruments, clothing, leather goods, radio and electrical products, metalwares, furniture, abrasives, cables, sectional buildings, paints and varnishes, aircraft and components, printing inks, rubber goods, paper, surgical dressings, umbrella handles, collapsible metal tubes, etc.

One of the latest "conversions" is at Bolton, where Montague Burton, Ltd., will soon open another huge clothing factory. At Blackburn, Herbert Foot Appliances, Ltd., have opened in a one-time chemical works.

A new industry to Liverpool (at Speke) has been started by The Mersey Textile Co. (Bernard Altmann), Ltd., from Vienna. A thousand workers are employed.

S. Wales

PORT TALBOT has prospect of an aluminium-melting works, by Metalurgical Industries, Ltd., of London. At Beachley (Monmouthshire) an aeroplane works occupying 280 acres is in prospect.

Cardiff Development Committee are seeking powers to set up its own Trading Estate. At present Cardiff is able to develop land, but has no powers to build factories.

At the Treforest Trading Estate 54 factories are now in production. There will be 80 at work before long.

Several textile mills are reopening as a result of improvement in trade. Barnoldswick's biggest factory, built at a cost of £40,000 and accommodating 3,000 looms, is expected to reopen after five years' idleness. It is being adapted for artificial silk processes.

Three large mills at Blackburn have resumed operations, and a mill at Brierfield, near Nelson, closed since last October, has restarted under new ownership.

Month by month since last September cotton-trade employment has been on the up-grade; improvement so far this year has been over 10 per cent compared with average for last year. Orders are more plentiful. Contracts for 15,000,000 yards of heavy ducks, valued at £750,000, were recently placed by the Government with Lancashire firms.

Cumberland

A FACTORY for processing and manufacturing cloth is to be erected at Northside, Workington, in the Cumberland Special Area, by John Crowther & Sons, of Milnsbridge, Huddersfield. It is expected that 900 men, women and juveniles will eventually be employed there.

A London firm, Silbertson & Sons, of cap, helmet, and clothing manufacturers, are leasing the remaining sections of Cleator Mill. This firm will employ upwards of 1,000 workpeople. This mill had been idle for several years when it was purchased and reconditioned by the West Cumberland Industrial Development Co.

Two sections of Cleator Mill had been let shortly beforehand to a concern with

its head office in London (Cumberland Paper Co.) for the manufacture of paper napkins, towels, cardboard.

A factory on the Solway Estate, Maryport, has been taken by a firm coming from Berlin (B. May) for making ladies' outerwear, chiefly knitted goods, and two Viennese (Traub & Benesh) have taken a 6,000-sq.-ft. factory for making umbrellas, sunshades, etc.

Four more factories are to be built on the Solway Estate; work has started on two of them.

Clydeside

THE Rolls-Royce aircraft factory going up on Hillington Estate and the maintenance factory at Abbotsinch aerodrome will cost £4,000,000 and is biggest development on Clydeside in 30 years. It will employ 10,000 workers.

Two new industries are opening on Trading Estates at Chapelhall (nr. Glasgow). Robt. Friedlander (Gt. Britain), Ltd., is making silk novelties, and Red Cedar Supply Co., household products.

Midlands

A LARGE new factory is being built for B.S.A. Tools, Ltd., at Marston Green, Birmingham. Landis grinding machines are to be manufactured under licence in this factory.

L. H. Newton & Co., of Birmingham,

manufacturers of bolts, nuts and screws, have added 50,000 sq. ft. of extensions. The factory employs 600 workpeople; 200 other hands have been taken on as a result of the extension.

For the second time in 18 months Mellor, Bromley & Co., Ltd., engineers, Leicester, have extended their works.

The British Thomson-Houston Co. is incorporating in its existing premises at Coventry a large factory on adjacent land. When completed the scheme will employ about 1,300 extra workpeople.

A new oil-from-coal refinery—described as the only unit in Britain where the coal is taken direct from the mine and converted into motor spirit and heavy oil almost on the spot—was opened at Bolsover, near Chesterfield, last month.

Orders have, it is stated, already been secured for the full year's output of 10,000,000 gallons, and another plant with similar capacity is contemplated.

The refinery will guarantee weekly output of 3,400 tons of coal from the colliery.

North East

NORTH-EAST coast shipbuilding industry has now work in hand and in prospect to keep it employed well into 1941, and as there remains a good deal of British merchant tonnage to be replaced, a flow of work may be maintained.

Joseph L. Thompson & Sons, Ltd., Sunderland, say they have enough work to keep their yard occupied for more than a year. They have orders for seven vessels of about 40,000 tons gross.

In addition to Thompson's orders, some 37 other contracts are on hand in Sunderland yards, including orders for three colliers which have been placed with

(Continued on page 42)

This is a NEW Summer Market

UNDER Britain's defence plans well over 500,000 young men this summer will be away from their homes and enjoying the invigorating conditions of training camps of some sort.

The "Terriers," for example, are "up" for a whole month instead of the usual two weeks. By October somewhere about 300,000 of them will be in camp.

This figure excludes Anti-Aircraft and Coastal Defence units, but of the Anti-Aircraft "Terriers" already more than 22,000 of them are in camp, and by October at least another 90,000 will be up for training.

The total figure of Territorials is growing at the rate of 15,000 to 20,000 a week. In addition to these volunteers there are the Militiamen now being made up for six months' training. These number about 300,000.

Here, then, is a huge market. Half a million young and vigorous men away from their homes and—many of them—far away from organized entertainment. Some anti-aircraft and coastal defence stations are incredibly lonely.

This market, then, is wide open to a great range of products. All camps have their officers' and other messes, and the requirements of individuals are, of course, practically unlimited.

Notably, there is a great opportunity in the camps for battery-operated port-

able radio. One trade paper, *Radio and Electrical Marketing*, has in fact looked ahead to this possibility and has prepared for its radio-dealer readers the outline of a whole scheme for taking advantage of this great "market under canvas." The scheme includes such things as drafts of sales letters to mess secretaries, etc.

Great as is the obvious opportunity here for radio, there is an almost equally big opening for such things as sports goods of every kind; many types of wearing apparel and personal comforts beyond those included in official uniforms; all kinds of foodstuffs and beverages; extra opportunities for cameras, movie-cameras, films, d. and p. servicing, etc.; thousands of men who did not use them before will take to bicycles, as some of the camps are very isolated from towns and other objectives.

Manufacturers who produce any types of goods that supply a need under these special circumstances, or who can devise new products to meet new needs, can therefore regard this national training period as a tremendous summer sales-aid.

Worth considering, too, is the point that many young people out of this half-million who, in the special circumstances, can be sold products for the first time may remain loyal to that type or brand for years after the camp disperses.

Launching a New Product Without the High Cost of Usual 'Big-Drum' Preliminaries

FIVE main factors influenced us in our decision to market Milk-Shake tablets, a new addition to the range of 'Dairy' brand products manufactured by R. J. Fullwood & Bland, Limited. Those factors were:

(1) The public is already educated to "milk-shake" consciousness by the sweeping popularity of milk bars throughout the country.

(2) It should be comparatively easy and inexpensive to introduce the next logical step—milk-shakes in the home.

(3) There exists little serious competition to milk drinks.

(4) The full weight of the Milk Marketing Board's propaganda urging the consumption of more milk would be in our favour.

(5) Our established connection with the retail distributive trade.

The New Product has an Outstanding Quality

We considered, therefore, that these five factors were sufficient to justify high expectation of a quick and successful entry into the national market.

We had to consider, too, whether this sphere had been entered before and, if so, to what extent had it succeeded or failed, and why.

It was found that there had been attempts to market milk-shakes. Cordials had been produced which, when added to milk, gave the latter various eye-appealing colours and flavours, but did not take from the milk itself that rather turgid quality which is its particular characteristic. The removal of this turgidity is, in fact, accomplished in the milk-bars by use of a high-speed electrical agitator—a piece of apparatus not available in the average home.

The new milk-shake tablets, however, possess an outstanding advantage over earlier prototypes in that one of the ingredients, rennet, accomplishes in a better, because perfectly natural, manner, that which the electrical agitator had formerly been required to do.

Rennet has the effect of lightening the consistency of milk and of partly "pre-digesting" it, thus making it more effective as a thirst-quenching beverage and, incidentally, rendering it less onerous on the human digestive system. This fact the user does not overlook.

In addition, the ordinary shaking, which is part of the preparation of milk-shakes, is also a process of aeration and has a still further lightening effect on the already clarified liquid.

The timely utilization, as it were, of other people's thunder enabled this distributor to get his national market without himself having to run the costly propaganda and general build-up usually necessary to put over a new line

*From An Interview With
G. HAVINDEN SALES LTD.*

It might be mentioned here, too, that Fullwood & Bland are manufacturers of rennet, so their connection with this improved tablet can be understood.

Here, then, was our new product which, again to its advantage, has had the blessing of the Milk Marketing Board as being the most likely medium of its kind to encourage the consumption of milk throughout the country.

Next we were faced with the task of presenting the goods to the public. As we already have a wide and close connection with the grocery trade, this seemed to be the most logical channel through which to start distribution.

There was no need to indulge in the expensive big-drum preliminaries usually necessary to the launching of a new product, for milk-shakes had already become widely known and

popular by the rapid spread of milk-bars throughout the country.

What we had to do was to link up with, and extend, an existing demand in a new field.

This was primarily accomplished by grocery trade-paper advertising, area campaigning to the trade by salesmen, and direct mail contacts with selected outlets throughout the country. The response to the latter was amazing.

This Special Dealer-Incentive is Proving Effective

These preliminaries were backed up and consolidated by convincing demonstrations in retail stores and at trade exhibitions.

In addition, special inducements were offered to the retailer in the form of



Clear glass phials enable the coloured tablets to be seen to advantage in the counter display carton. In the foreground are the metal caps which enable ordinary tumblers to be used as 'shakers'

IT HAPPENS IN YOUR BUSINESS (3)

**"THERE HE GOES AGAIN—
does he ever do any work?"**



Each week you buy your employees' services for a certain number of hours. But how many of these hours are actually spent on the jobs for which they were engaged? A check-up may provide many surprises. Time may not be deliberately wasted—but *unavoidably wasted* through inefficient equipment. Time spent walking to and from badly placed files—searching for documents in bundles and papers—digging out facts buried in folders and ledgers—is time robbed from productive work.

Shannon 'planned efficiency' Sys-

tems eliminate costly time wasting—and utilise office accommodation to the greatest advantage. 'Planned Efficiency' means Shannon files designed to supply any required document in a flash—Visible Records which give 'at a glance' key facts and figures in crystallized, usable form—desks to assist executives, clerks and typists in their specific duties—multi-purpose counters, cupboards, worktables, etc.

Shannon manufacture the world's largest and most comprehensive range of standardised office equipment, based upon more than 50 years'

experience in planning profitable offices for firms of every description. It will pay you to check up on your present office arrangements—and to investigate the possibilities of Shannon Office Equipment. May we send you full descriptive literature? Please write or telephone.

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5 Plans That Are Cutting Sales Costs

This Payment Method Expands Turnover

PAYMENT by commission on sales has often been criticized as an unsatisfactory method of paying salesmen, and most firms now use some kind of a standard wage *plus* commission system.

There is, however, another "payment by results" scheme which could be used by many companies. It consists of payment on calls and demonstrations made as well as on sales.

To operate the scheme successfully strict control and supervision is necessary. For example, in house-to-house selling a heavy responsibility rests on the team supervisor to see that calls and demonstrations are made. This may mean a reduction in the number of men in a team so that control can be exercised in full. Each man can be given a limited number of houses to be called upon and a maximum time in which the calls are to be made.

The rate of payment can be worked out on the basis of a standard weekly wage, thus preventing any major abuse of the system. Three scales of payment can be used: (1) a nominal amount for the call; (2) additional payment for demonstrations; (3) a commission on sales.

There are several means of checking claims on demonstrations. The simplest, of course, is to have each man produce name and address of the householder and a short report on the "dem." In any case, the average number of demonstrations to calls and the average number of sales to demonstrations is known—or can be worked out—by firms using the system. In this way a check on abuse can be made.

Several companies using this scheme claim that it encourages salesmen to work harder. Results show increases in sales ranging from 2½ to 12 per cent.

Better 'Directions-for-Use' Doubles Sales

A CERTAIN firm for years sold their packages of tick-killer to farmers. On the packages, also for years, appeared the same stereotyped "instructions for use." Yet, despite these "instructions," users constantly wrote in to the company beseeching answers to dozens of important questions that were not met by the printed instructions.

You would think that to any executive of the manufacturing firm who was not dead asleep it might occur that the original instructions were inadequate. But no, this miracle did not happen until a new sales manager saw the obvious fault.

"We'll gather together all these queries," he said; "see what the users really want to know and then print proper instructions."

This was done, and the improved instructions were necessarily longer, so, instead of being printed on the package, they were set out clearly on a little folder inserted in each package.

This plan almost completely relieved users of the nuisance and expense of writing in to the company. It created a far more satisfied clientele.

But this sales manager went still farther. He instructed his salesmen to contact as many farmer-users as possible and to ask them about the tick-killer, seeking to find out if they had any more difficulties. Salesmen's job was to report all these difficulties back to the sales manager, who then, through the firm's technical department, saw that they were adequately answered and added to the instructions folder.

The result of this intelligent move, inside a couple of years, has been not only the creation of a first-class instructions manual but has also been the discovery (through the salesmen's reports from the farmers) of a range of quite new uses for the product.

To-day, sales of this product are about double what they were two years ago.

Makes The Retailer More Effective

A BASIS for better dealer co-operation is a "bespoke" sales aid service to the individual stockist. This method provides, within defined limits, showcards, display material, tickets, etc., designed to the retailers' own specification in regard to size, colour, typography and wording.

The manufacturer who really values the active co-operation of his retail stockists has every reason to retain this individuality. One thing is certain: the retailer will not fail to make use of sales-promotional matter which he himself has planned. The economic minimum of "one," which is a feature of such a machine as the Maseeley, makes the production of these individual sets of promotional matter a very practicable proposition.

This is how the service operates:

A letter goes to each stockist, making the offer and stating the limitations within which it is made. It should be accompanied by a form to be filled up with details of the size, shape, colour, wording and decorative motif, if any, required.

In order not to swamp the producing department it may be desirable to "stagger" the issue of this letter and so ensure continuity of production rather than intermittent spasms of feverish activity.

In cases where no response is achieved the manufacturer's traveller is instructed to open up the subject matter of the letter on his next call. He should bring back a sketch of what is required or, better still, a sample to work to.

As the "requisitions" are received they are dealt with in rotation. When dispatched to their destination they are accompanied by a further form for the next requisition.—*Maseeley Sales Promotion Magazine*.

Group Rivalry Idea For Sales Contest

ONE of the ways to liven up a sales contest is to make use of natural rivalry between competing groups. Here are some unusual "groups" which have been put to work in some firms.

Grouping according to age. Older men on a sales force like to feel that their experience enables them to do a better job. They also like to prove it when lined up against a team of the younger men. Thirty-five was the deciding line used by a manufacturing confectioner.

Grouping according to sports preference. The average man is a partisan of some sport. Line up the declared footballers against the declared fishermen. A furniture-making firm used this idea with success.

Grouping according to condition of servitude. Yes, the married men against the single men.

Grouping according to physical characteristics. When the fat and lean men sprint toward the same goal at the company picnic, it is a hotly contested battle, and the same thing happens in the sales contest.

Grouping according to length of employment. Oldster vs. youngster teams, based on point of service, combine for still another way to harness natural rivalry in contest technique.

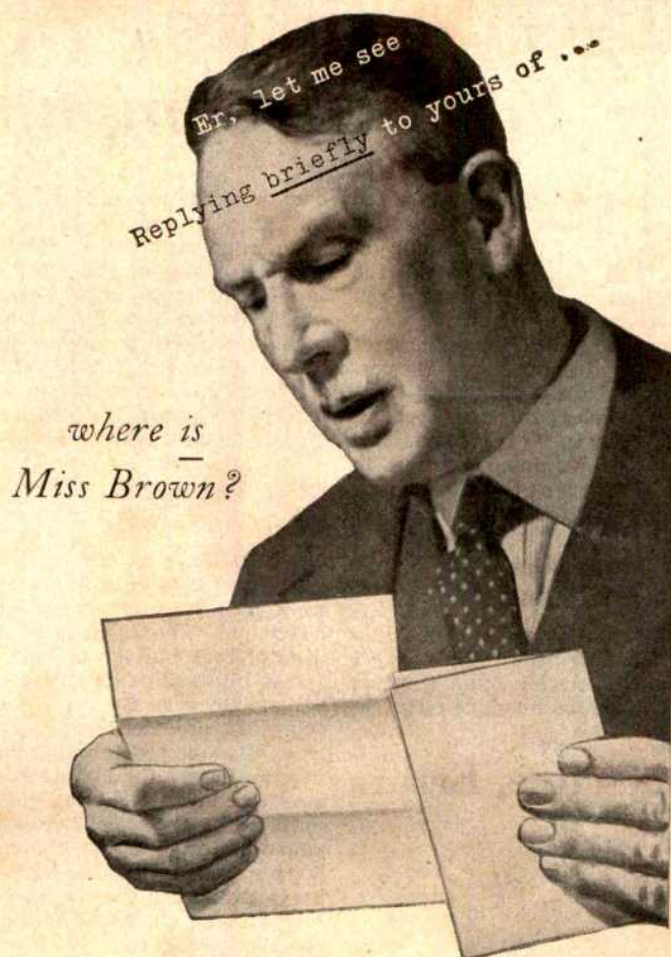
New Sales Aid For Sales Managers

MISSING from the sales manager's battery of promotion and other reference books has been, until now, a comprehensive directory of the Departmental Stores, Chain Stores, Co-operative Stores and large specialized Stores throughout the country.

Store Annual, just published (20s.) by Store Management, Ltd., 356 Oxford Street, London, W.1, for the first time fills this blank.

Section one of the book lists Department Stores, including name and address of store, telephone no., proprietor company if any, approximate number of staff, selling floor area, and names of personnel including general manager, secretary, merchandise manager, buyers, dispatch and transport manager, display and advertising manager, etc.

Fifteen other informative sections follow. *Store Management, Ltd.*, have a leaflet describing this reference book; it will be sent to any sales executive, on application.



**— YES
BUT HOW
LONG DID IT
REALLY TAKE
TO REPLY ?**

Dictation delay costs the average executive a whole hour of his working day. 60 valuable minutes wasted, when they could be saved by the modern dictating method—Ediphone Voice-Writing. You never have to wait for a typist with an Ediphone at your elbow. Letters, memos, staff instructions are recorded immediately, and typed when convenient. You benefit—the whole office benefits—in smoother, more orderly efficiency.

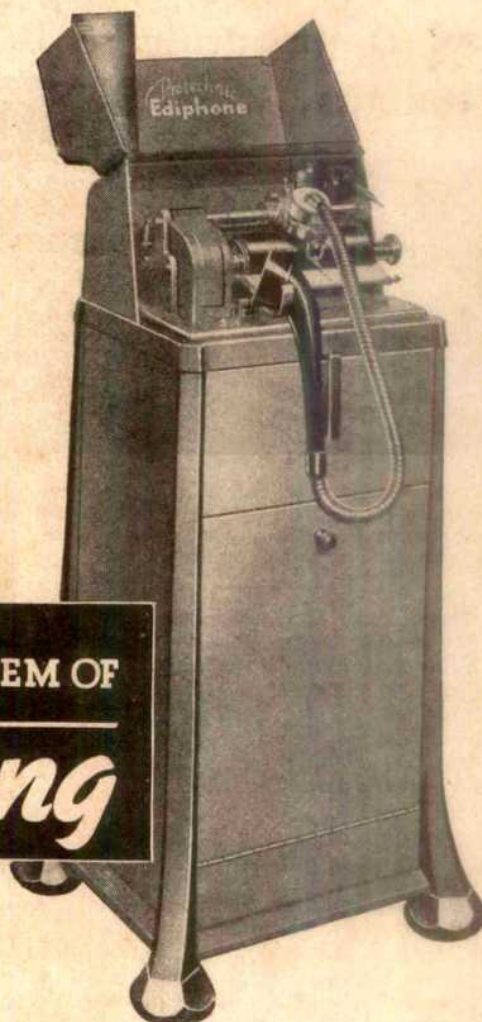
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Modern WEIGHING Methods . . . That Save Money For Six Companies

HANDLING such diverse products as bread, metal bars, cement, milk, motor-cars and small repetition parts, each firm mentioned in this article meets on common ground in agreeing that substantial economies can be effected by the use of modern weighing equipment.

Whether those economies are represented by a saving of material or time, or by the production of a better article, is immaterial. All are agreed on the vital importance of accurate weighing.

Discrepancies due to old or unsuitable weighing equipment may be so small as to be individually unnoticeable, and herein lies the greatest danger. Losses in weighing, for the most part unsuspected, continue to accumulate until their total becomes so large that they may finally draw attention to their existence.

having a central zero, and graduated "Light" and "Heavy" on respective sides. Any piece of dough coming on to the scale, and which falls outside the pre-set weight tolerances, causes a red or green electric lamp to glow.

Such positive indication eliminates any error through carelessness or oversight on the part of the operator.

Similar principles are employed in check-weighing wrapped bread, which is carried from the wrapping machine to a scale by a conveyor at the rate of forty loaves per minute.

2. For Metal Bars, Tubes, Wire, etc.

IN the factory of a well-known metal manufacturer in the Midlands a "Rollerweight" printing scale (Fig. 2) has been installed for weighing outgoing

operate if the weighing is not correctly carried out, and, in addition to the inherent advantages of such a record, special features of the machine are its speed of operation and its sensitivity.

The average time for weighing is sixteen to eighteen seconds. In spite of the extensive weight range it is possible to obtain records correct to within two ounces, an accuracy which has resulted in considerable economies for the firm.

3. Ingredients For Cement

ACCURACY in compounding ingredients is of vital importance in the works of a large cement manufacturing company. The ingredients are taken from storage bins on to belt conveyors and fed into skips travelling to the furnaces. Between the conveyors and the skips are predetermined weight scales (Fig. 3) connected to weigh hoppers.

Immediately the hopper is filled to a predetermined weight an electric switch, operated by the scale, cuts out the conveyor motor, and the contents of the hopper are emptied into the skip, which by this time has travelled beneath it.

The rising steelyard of the weighing machine then restarts the conveyor motor, and an electrical interlocking system prevents any operation taking place other than at the correct time, enabling the cycle to continue automatically with little supervision.

4. In a Creamery

WHILE considering continuous automatic weighing, the method used in a large creamery may be mentioned (Fig. 4).

Milk is fed from the coolers into the reversible flow diverter chamber of a continuous liquid weigher. This diverter chamber has two valves

HOW...? By Saving Work, Time, Errors and contributing to Better Products...

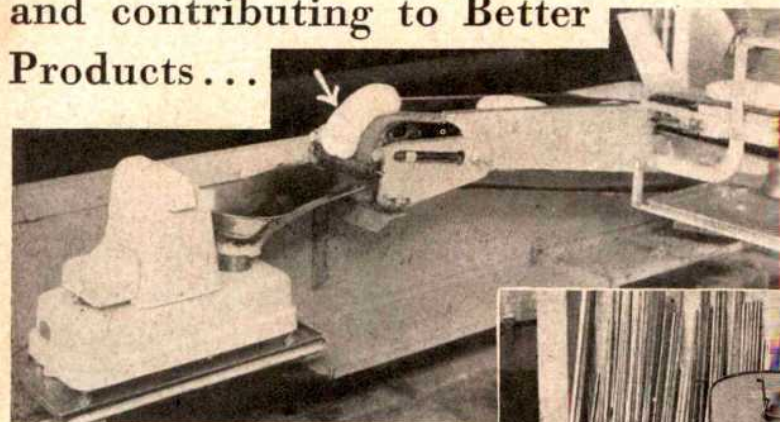


Fig. 1. 'Heavy' or 'Light' dough (arrow) actuates a red or green light as it falls on the scale-pan from the moulder. Preliminary weighing has thus been speeded up tremendously

Often, however, their existence and origin remain concealed.

More and more manufacturers are taking heed and are giving greater attention to this problem, calling in expert advice and replacing obsolete equipment with weighing machines which are right for each particular purpose.

1. In a Large Modern Bakery

FOR example, at Scribbans, Ltd., Birmingham, whose bakery is one of the most up to date in the country, weighing is necessary at a number of stages of production. The equipment used for two operations is of particular interest.

Dough from the final moulder is carried by conveyor to a predetermined weight scale (Fig. 1), fitted with a chart

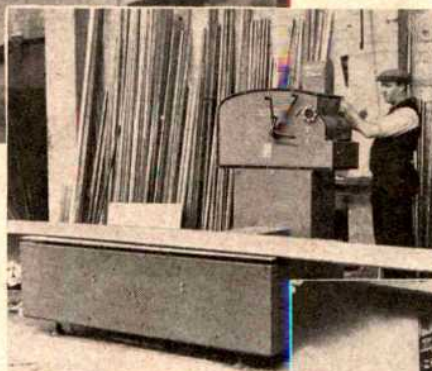


Fig. 2 (above). Rapid weighing (correct within 2 oz.) of metal bars has made big savings here

consignments of non-ferrous bars, tubes and coils of wire.

The printed record obtained from the machine, giving date, a code letter, tare weight, nett weight and a serial number, is checked against outgoing invoices.

This printed record is indisputably correct, since the machine will not

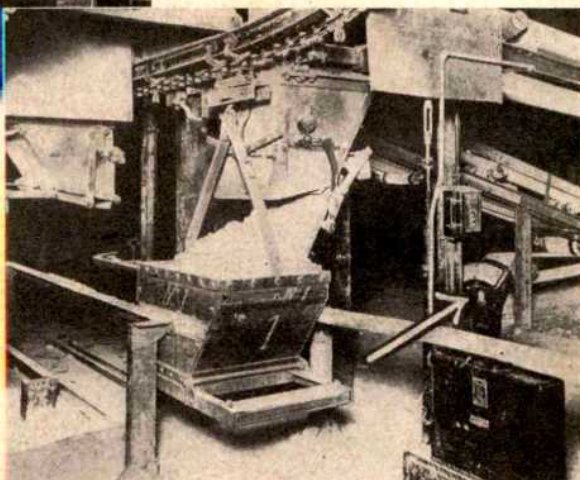
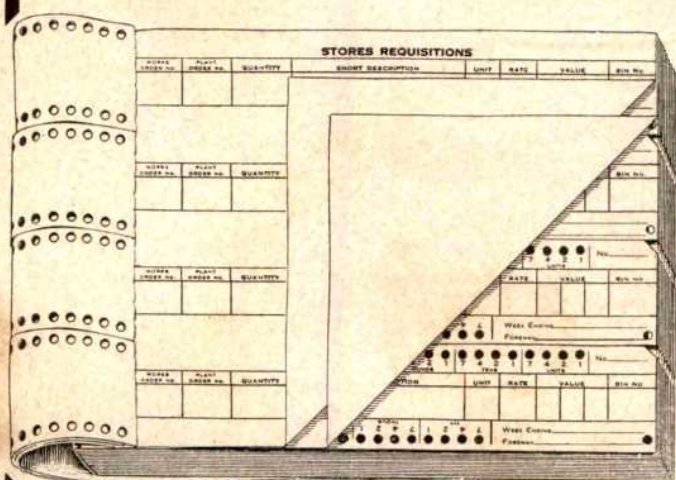


Fig. 3. These predetermined weight scales automatically control correct loads into skips

SUCCESSFUL SIMPLE SPECIFIC STORES CONTROL

An essential feature of Factory efficiency



IN THE FACTORY. The Paramount Stores Requisition brings "Punched Card" facilities into the Stores system. These Requisitions are supplied in many forms, being either single documents or in duplicate or triplicate sets, one or more to view and gathered into books. They can be any size and cover every Stores purpose.

Illustration shows Book of Requisitions in triplicate, four requisitions to a page. Top copy retained in Foreman's Book, second and third copy to Stores, second copy for posting Bin Cards, third copy (unit punched card) to Costs Office for speedy sorting of material charges to jobs and for Bulk Stores posting. In some cases they can be pre-punched before issue.

Juniors operate this simple hand-operated system.

IMPORTANT NOTICE. A special chart has been prepared showing the complete layout of a speedy and effective Stores and Costing Control Scheme for Labour and Materials.

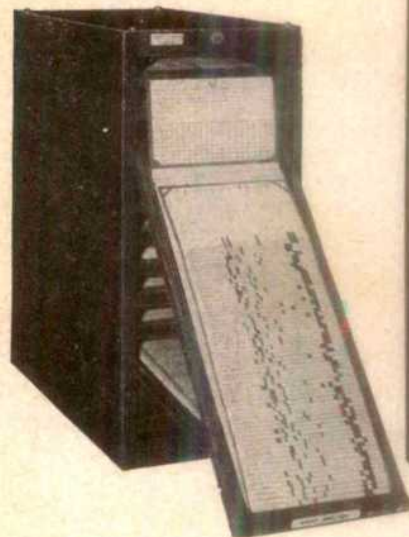
From stamping of master clock card to final Directors' figures, involves only six entries inclusive. A copy will be gladly posted on request.

IN THE OFFICE. Copedex Cabinet equipment is an essential feature in the effective Stores system as it visibly portrays all physical stock balances, material on order, slow moving and obsolete stock, thus facilitating absolute control of stock movements

Its chief feature is the manner in which it provides for "insight" instead of "oversight", giving positive executive control at a glance. It requires only half the usual clerical time for upkeep, which can quite safely be left to intelligent juniors.

Cope-Chat specialise in Control Systems for Purchases, Stores, Planning and Progress, Production and Costs.

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SPECIALISTS IN COSTING AND WORKS ORGANISATION

BRANCHES THROUGHOUT THE PROVINCES

which open and close alternately and divert the flow into one or other of the weigh tanks. When a predetermined load has been reached in one tank the position of the valves in the diverter chamber is reversed. At the same time the discharge valve in the full weigh tank is opened and the valve of the empty one closed. This sequence of operations con-

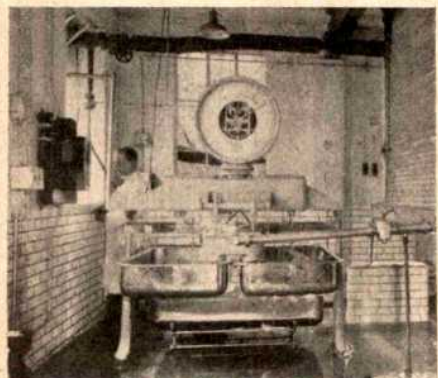


Fig. 4. Speedy, automatic weighing and weight recording is an important point in this creamery

tinues so long as a supply of liquid is fed to the scale, and the number of weighings is automatically recorded on the counter. At the end of the run the weight of any residue below the predetermined load is indicated on the dial of the scale.

5. For Light Metal Parts

IN the motor-car industry weight is a vital factor, as is evidenced by the increasing use of light metals. To obtain the necessary accuracy and balance in such components as pistons, connecting rods, cylinder heads, etc., a strict weight control is exercised in the production of these parts.

The balance of connecting rods, for example, is checked by placing a master specimen on to a balancing scale (Fig. 5), which is adjusted to give a zero reading.

Fig. 6 (right). This automatic visible-indicating counting machine for small parts saves time and money in several directions

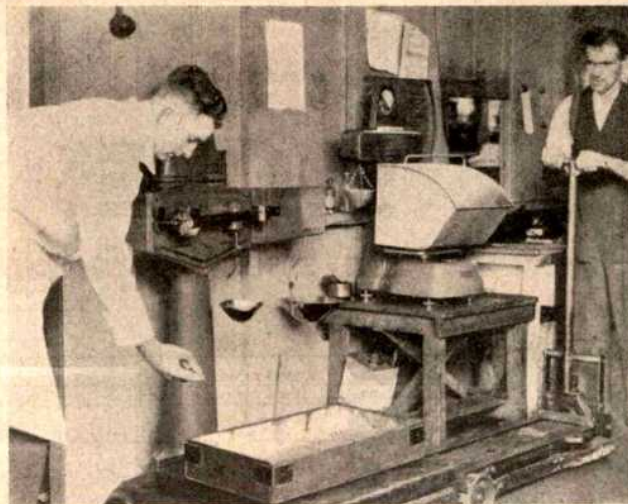
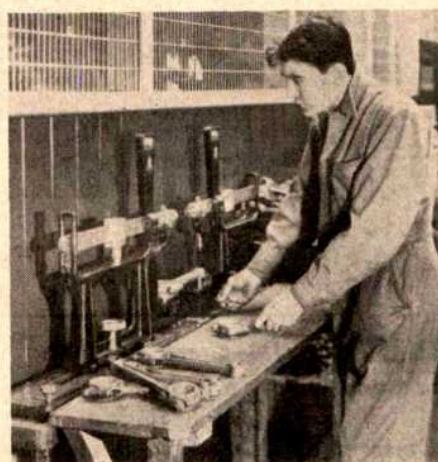


Fig. 5 (below). Fast, accurate checking of motor-car parts



Production components can then be passed rapidly over the machine, and the amount of the slightest variation from standard is accurately indicated.

6. Weighing Quicker Than Counting

IN many factories a saving of time and material is made by the use of modern

counting machines employing the same basic principles as the industrial visible weigher.

In a certain factory producing mass quantities of small metal components much difficulty was experienced in getting promptly the output figures, a necessity because of the existence of an employee bonus payment system based on output.

The problem was to count (in lots of one hundred) four hundred loads of varied articles every ten hours, which was to provide a check on each operator's output at intervals and to dispense with the final collecting check.

Two visible-indicating counting machines (Fig. 6) were installed at a central counting point to which all the articles were brought by one man specially deputed for this work. The operators were therefore able to remain continuously at their machines. Since the installation output has been increased, with a consequent rise in bonus payments, and a greater degree of accuracy in the resultant figures has been obtained.

Keeps Your Factory Walls Dry Right Through

RAIN, beating against the brickwork sides of buildings, is absorbed by the bricks. The pores of the ordinary brick exercise capillary attraction—to such an extent that a single brick can absorb from half to a whole pint of water. It does not require much imagination, therefore, to visualize the state of ordinary brick walls of factory and other industrial buildings during the typical English winter months.

A preparation is now on the market which causes rain to run off brickwork like water off a duck's back. It is a preparation which you apply to the outside of walls and so prevent the bricks from becoming damp. This is quite distinct from an interior treatment which merely

resists seepage into the inside from water-sodden bricks.

Known as "Metallic Liquid No. 2 for Exterior Brickwork," it can be sprayed on to the walls, or put on with a brush.

The principle is that it "lines" the larger pores of the bricks with a permanent water resistant, so destroying the process of capillary attraction. The liquid does not completely fill all the pores: this is not necessary; so the bricks can still "breathe."

The treatment does not impart colour or a glaze to the bricks. It leaves the colour and texture of the original bricks unchanged. This point is not so important, perhaps, for factory buildings, but it often is for private houses, where artis-

tic effect may depend on the colour and texture of specially selected bricks.

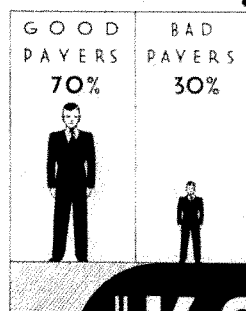
A second Solution is also available for similarly proofing the exterior surfaces of stone and cement surfaces. Manufacturers of these fluids are George Lillington & Co., Ltd., 30 Denman Street, London Bridge, S.E.1.

How To Escape Colds

FOR the business man to keep himself and staff free from colds and 'flu is one of the urgent needs of the coming winter. Colds cost Britain £50,000,000 a year. Industry pays most of that.

A bacteriologist and a physician have combined in writing a special 76-page book: *How to Escape Colds and Influenza* (Leonard Hill, 6d. only). It is a very comprehensive little work: worth getting.

... and now



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Why allow your Hire Purchase accounting system to be dictated by the 30 % of people who fall into arrears ?

The Kardex Kolectrol system is first framed to handle the 70 % of good payers with the minimum effort, and to picture these as the clean background upon which to detect the bad payers—like footmarks in the snow.

Clerical effort is thus concentrated in the direction where it is most needed—first, to locate delinquents ; secondly, to check the spread of bad paying habits; thirdly, to collect the cash outstanding.

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BRANCHES IN ALL PRINCIPAL CITIES

This is HOW . . .

We Built Our Staff A.R.P. Shelters

Contributed by E. K. COLE & CO., LTD., Southend-on-Sea
(Second Article in the Series)



Design of shelter entrances *MUST* permit speedy entrance. Gradients steeper than 1 in 7 cause stumbling. Rain flowing down the ramps can be trapped by sumps at shelter entrances

MANY business firms have already brought the constructional part of their A.R.P. plans to an advanced stage. Probably the majority of firms, however, especially those of smaller size, have not progressed so far.

This second article, therefore, provided from actual experience by this well-known radio firm, will help considerably.

It is an unfortunate thing that the money and time spent on trials and experiments is being duplicated over and over again in all parts of the country, placing on firms a financial burden as ill-timed as it is unnecessary. In addition, grave risks arise from the likelihood of shelters being incorrectly built owing to the absence of adequate information on the subject.

The Ekco shelters provide accommodation for 3,000 employees, but the method of construction can be adapted to provide for any desired number.

Simple 'Mass Production' Method Saves Costs

The basic layout consists of a series of rectangles, each being formed of four galleries, preferably not exceeding 25 feet in length. The object of this form of construction is to minimize the effects of blast and localize the results of a direct hit. Communicating corridors between each series of galleries provide at

least two means of exit from any point.

The seven rectangles in these particular shelters are timber-lined throughout, and the roof is of treated corrugated iron under a mound of sandbags and earth, three feet six inches deep. The depth of the shelter from roof to floor is 7 feet. The floor-boards are laid on creosoted cross-bearers bedded in dry gravel.

A form of mass-production was devised for walling the trenches. The boarding, *outside* the uprights, was pre-

HELP

For Your Own A.R.P.

A.R.P. measures demand thought and planning. Many firms are not able to investigate fully the problems involved, but adequate protection to staff *MUST* be provided.

E. K. Cole, Ltd., well-known manufacturers of radio, have provided shelters for their 3,000 employees. In so doing they have closely investigated all A.R.P. problems and have gained much experience in the work.

As a contribution to National Service, Ekco offer, free, to other firms, detailed information and plans of the work they have done. This information is being published in "Business" in three articles covering:

- (1) Staff Organizing and Training
- (2) Shelter Construction
- (3) Shelter Lighting

The first of these articles appeared last month; number two is on this present page; number three will be published in August.

pared entirely above ground working to a jig, and lowered in 50-ft. sections into the trenches. Cross-struts at top and bottom, each butting exactly on to the opposite members were then placed in position.

This proved to be a particularly satisfactory form of construction, being capable of swift completion and producing galleries of regular shape and section.

The uprights and cross-pieces consist of 4 in. by 3 in. rough deal, and the planking for the walls and seats of 5 in. by 1 in. deal, suitably treated with creosote or other wood preservative.

Sandbags are piled on the roof to prevent the leakage of soil through junctions or crevices, and the shelter is made blast-proof and splinter-proof by covering the sandbags with a mound of earth 3 ft. 6 in. deep. A deeper loading of earth and a concrete shell are contemplated by E. K. Cole, Ltd., as a future development to make the shelters safe, to a certain extent, from a direct hit by small aerial bombs.

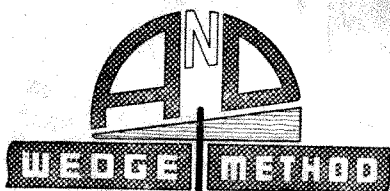
Under No Circumstances Can 'Black-Out' Occur

To protect the shelters from flooding, drainage sumps are provided at the base of each entrance and exit. These consist of pits about 5 ft. square by 4 ft. deep, filled with brick rubble and covered with gravel. The soil in which the shelters are built is reasonably free from surface water, and no flooding or even leakage troubles have been experienced throughout the winter.

An elaborate system of emergency lighting has been installed, planned to ensure that in no circumstances can the trenches be brought to complete darkness. A supply of 230-volt electricity is

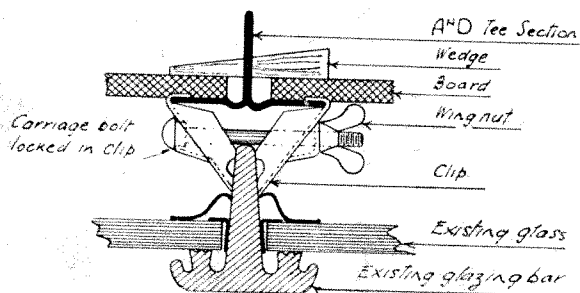
This view of an emergency exit indicates the method of shelter construction. Above the shelter cross-bars is corrugated iron sheeting, sandbags, and finally 3 ft. 6 in. of earth. Exits are *NOT* used as entrances. Entrances have longer ramps with easier gradients





(PATENT APPLICATION No. 34383/38)

OBSCURATION OF LIGHT



A.R.P. THE NEW CIVIL DEFENCE BILL. One of the paragraphs reads as follows:—

“All persons in control of factories, mines, and public utility undertakings will be required to make preparations to obscure lighting and glare in time of war, and in many instances the premises will have to be camouflaged.”

The solving of this problem has given Managers of Industrial Companies great concern and many schemes have had their consideration. We have adapted the now well-known AnD Wedge Method of fixing boards, a scheme which, for efficiency and simplicity, has much to recommend it, and the sketch shown gives the main features of its application.

It can be used on any type of glazing bar and is fixed by unskilled labour. The slotted T-Sections are permanently placed in position by means of special clips and left until it is necessary to obscure lights. When warning is issued to proceed with the obscuration, selected opaque boards can be fixed in a very short time by means of wedges which, being fixed without nails or screws, can be removed quickly and easily without damage.

An adaptation of this method can also be used on vertical windows.

We invite your enquiries for a blue print of this method, which can be applied at reasonable cost.

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laid on from the Corporation mains. In the event of a break in supplies, recourse can be made to the portable generator system housed in an underground power room.

Each rectangle of galleries has a double ring main separately connected to the 110-volt emergency generator. The wiring is arranged in such a way that only in the event of four separate and well-distributed breaks would lighting supplies be interrupted. As a further precautionary measure there is an auxiliary battery system of individual wall torches, stationed at brief intervals throughout the galleries. Full details of these lighting systems are available on request.

The emergency generator is housed underground in a solid concrete structure, with walls two feet in thickness. The main distributing cables are protected by an additional nine inches of concrete and rubble. To enable the generator to be serviced or removed for casual use if required, a manhole opening has been left, subsequently to be concreted and sandbagged.

A degree of assisted ventilation is obtained by a large fan connected to the generator. When gas is not present, this fan may be utilized to draw through the galleries a steady supply of fresh air from the various entrances and exits.

The general gallery equipment includes stretchers mounted in wall racks, plank seating along each wall, electric light points and, at frequent intervals, individual battery wall-torches as a final safeguard against failure of the lighting supply.

At the corners of each rectangle are depots, equipped as follows:

Telephone connecting to external observer post and G.P.O. exchange.

Radio for news reports and diversion during extended periods of emergency. Some form of distraction is considered essential for the prevention of panic, and, in addition to radio sets, dart-boards, playing-cards and other similar items might be provided.

Drinking water in cans, renewed daily; and cups.

Digging tools, for emergency use—two picks and two shovels.

Sanitary accommodation: in separate bays (two to each corner), with sanitary pails, etc.

Blankets, two to each corner.

Plans of trenches. Each rectangle of trenches is allocated a "Square" number, and each gallery is identified by its square number and compass point, i.e., 3 N, 2 E, 7 W, etc. Signboards and plans are fixed at each corner, so that the nearest exit can be seen at a glance.

To each group of four rectangles a casualty station is provided. This takes the form of a bay, 12 ft. by 6 ft., let into the "square" formed by the galleries. In times of emergency these bays would be controlled by staff nurses and would be in addition to extended First Aid facilities in the factory.

The equipment scheduled for each of the casualty stations is as follows, although only essentials have been included and extras might be added in the light of later experience.

- 4 stretchers on runners
- 16 blankets
- 8 pillows
- 1 table
- 1 water heater

- 2 large enamel jugs
- 2 refuse pails
- 2 washing bowls
- 4 couch mattresses (18 in.)
- 1 soap dish
- 1 convector heater

Complete First-aid and medical equipment.

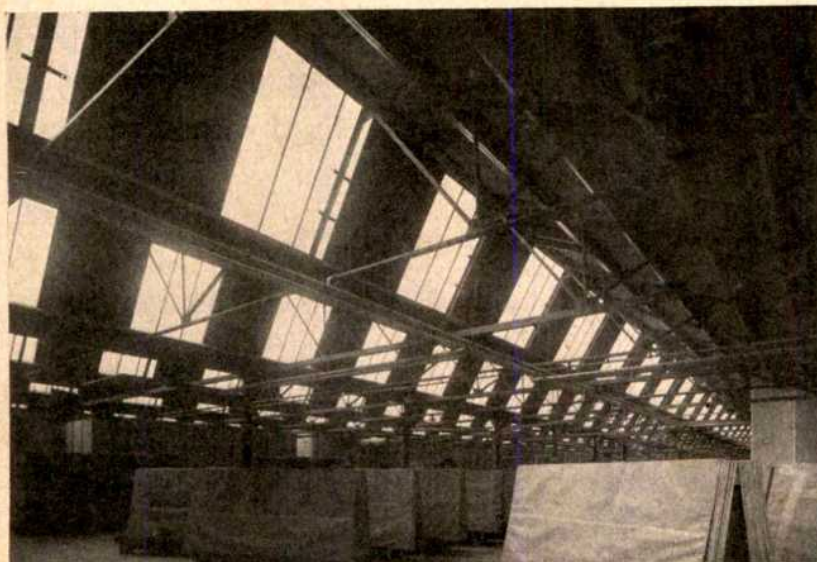
More detailed information is available



Short galleries minimize the effect of blast from explosives

on any of the points covered in this brief survey, and no doubt many other manufacturers with practical experience will be able to offer the benefit of their recommendations.

Firm's Own Product Helps A.R.P. 'Black-Out' Plan



One of the problems that face many firms is to decide how far light obscuration be allowed to interfere with natural daylight conditions. This plan at Turner's Asbestos Co., Ltd. is arranged so that it does not in any way jeopardize the speed or quality of work. Firms should utilize these longer daylight hours of summer in which to settle their own individual obscuration plans

IN the main buildings of their works at Trafford Park, Turners Asbestos Co., Ltd. (branch of Turner & Newall, Ltd.) have already prepared their roof-lights for A.R.P. black-out. Permanent partial obscuration of half the glazed surfaces has been made by means of asbestos felt, one of the firm's own products.

In the event of emergency the remainder of the roof-lights can be obscured within 24 hours. Work could continue under artificial light.

This company's A.R.P. measures are very comprehensive. Shelter for 2,000 workpeople is provided by tunnels constructed deep beneath the concrete floor of a single-story steel-frame building. Small local shelters are provided for key men who, in case of aerial attack, would have to remain in the works to shut down special plant.

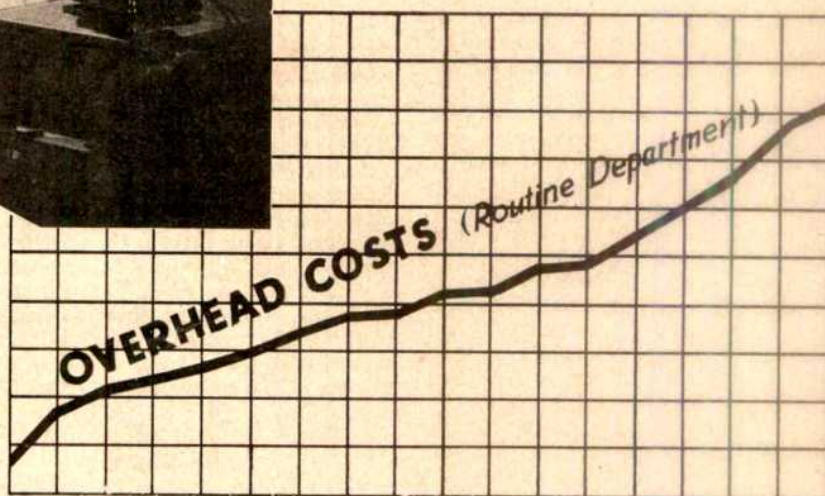
The A.R.P. plans for this factory and for the firm's other plants at Widnes, Rhoose, Erith and Dalmeir have been initiated by Mr. B. E. Williams, joint managing director of Turner & Newall, Ltd.

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The introduction of PRIMUS Continuous Forms will provide you with a leeway sufficient to accommodate the extra work without adding to overhead. The reason is simple, for it has been proved time and time again that the difference between not using and using PRIMUS is 33½ per cent, or one hour in every three of each typist's time.

Even in normal conditions PRIMUS Continuous Stationery, used in conjunction with the PRIMUS Typewriter-attachment, effects a definite cut in costs. Its use prevents disruption caused by staff-absenteeism during vacation-periods or sickness, and enables any sudden temporary rush of transactions to be carried through smoothly without staff working overtime.

Let one of our consultants come in and explain to you the application of the PRIMUS System in your organisation.

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HOP 0204-5-6

That Office Emergency-Evacuation Plan . . .

WHAT Equipment — WHAT Records WHAT Staff will you need to Transfer?

THE importance of protective measures in the main centres of population may be gauged by the fact that in Greater London no less than 62 per cent of the workers are engaged in industry groups which would be particularly important in war-time for production, commerce and government.

Whilst complete evacuation of the more vulnerable centres is obviously not possible, a thinning-out process by part evacuation would reduce the exposure to casualty, relieve essential services, preserve business, promote confidence and thus would enable successful resistance to be offered to any sudden onslaught designed to create panic.

Though there would be many difficulties to be overcome at the outset, it is considered in official quarters that the removal of essential financial and executive activities to safer areas would constitute an important emergency measure and one which would clearly help very considerably the thinning process.

This removal does not, however, come within the direct purview of the Government's responsibility to the civilian population. Private enterprise must therefore exercise its own initiative and ingenuity.

As that part of a business devoted to the direction and co-ordination of all activities, the office springs at once to mind not only as the key feature but as

**In this problem the Office Manager must be the Key Man.
It is his job to analyse the routine and to provide a skeleton
but completely workable plan**

From C. H. COSTELLO, A.I.C.S., A.C.W.A.

that part of the average organization which may most easily be transferred elsewhere, either wholly or in part.

Whether such evacuation is practicable or desirable is, in any given case, a matter for the management concerned. But assuming that this step is decided upon, it remains to determine the measures to be taken to ensure continuity and unimpaired functioning. The full plan of operation will cover, of course, staff rearrangements, and full working and transport instructions, and each aspect may be developed simultaneously, since all are closely related.

First Need is to Analyse The Work

The first step in formulating the plan for work under the new conditions must be to arrange for a complete statement of all operations carried out by all sections of the office under the existing organization.

This can be most conveniently done

by requiring each department or section head to produce a statement detailing the work under his control. These statements must then be scrutinized and possibly the persons responsible consulted to ensure that any functions which appear susceptible to curtailment may receive consideration from this aspect when formulating the new plan.

At the same time a statement will be required from them of the estimated minimum staffs and office equipment required to carry on under conditions as they emerge, *i.e.*, on the basis of such preliminary forecasts as may have been made of the probable trend in so far as the particular business in question is concerned.

Thus, for example, the conclusion may have been reached that a state of emergency will produce a greatly expanded demand for production, or alternatively a very considerable contraction of the market. Or, owing to the fact that raw materials are obtained from countries which may become inaccessible, the possibility of having to find new sources of supply will have to be taken into account, and so on. All such factors will react upon the volume and incidence of office work.

This Staff Classification Is Important

It may already be the practice to keep a record of the National Service activities, whether in the Territorial Army or otherwise, of individual members of the staff, and in this event it is only necessary to circularize the staff in order to be able to bring these records up to date. If such a record does not already exist, however, then the first step must be to provide it.

These particulars taken in conjunction with the intentions of the Government as published from time to time, and having regard, of course, for individual ages, will enable to be determined what proportion of the staff would be called upon for immediate National Service of some kind.

The result of this investigation will undoubtedly vary widely between firms according to the average age of the employees; thus in a firm whose members

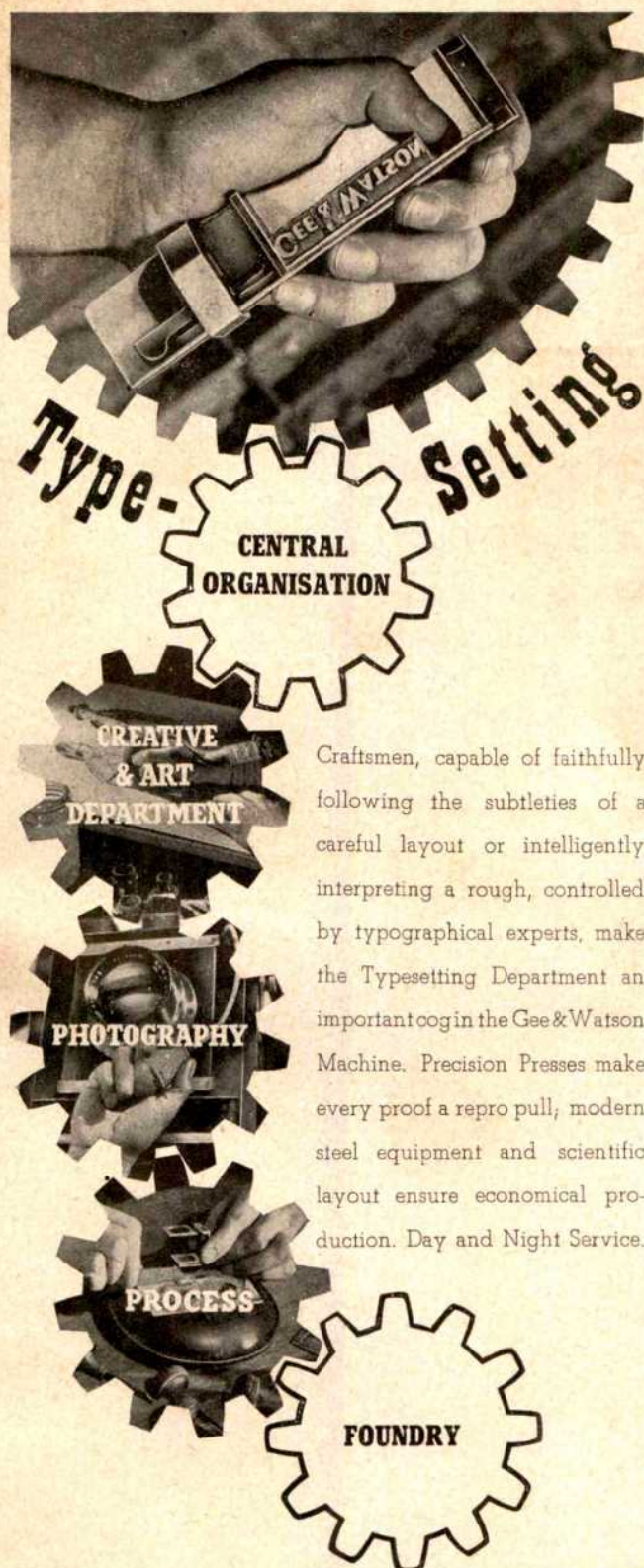
How Modern Equipment Assists Your Business

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whole organization
with
Greater Accuracy
Greater Speed
Simplified Routine
Less Worry
Less Fatigue
Less Waste
Lower Costs**

Results

**Bigger Turnover
Greater Purchasing
Power
Wages Up
Higher Net Profits
Workers Happier
Beneficial Reflex Action
on Other Trades
All-round Prosperity**

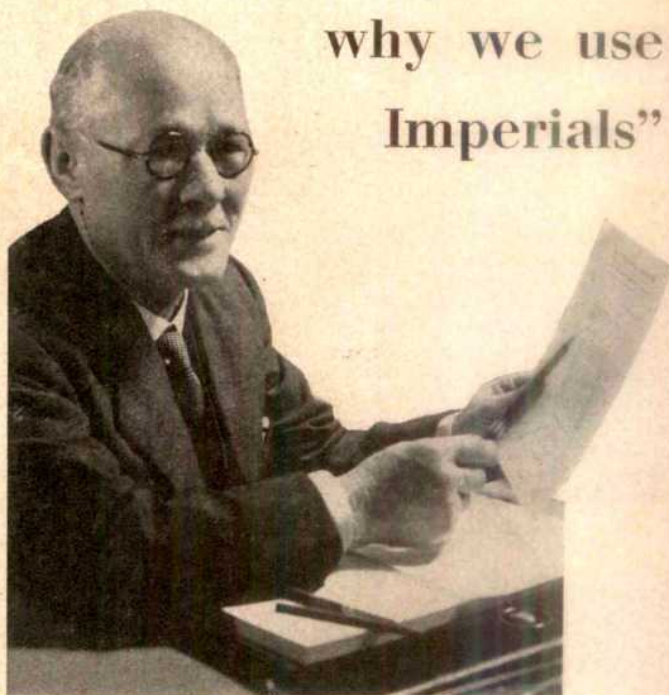


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are predominantly below age 30, it will probably be found that a depletion as heavy as 50 per cent of the staff might be expected. Where, however, the predominating age is above 30, then not only will there be a lower proportion called upon but an appreciable interval may be expected between the commencement of an emergency and the date of individual calling up.

It then becomes possible to estimate fairly accurately the staff movement which is likely to take place in each department or section.

When a complete analysis of the work has been carried out as already discussed, the key men who would be required to proceed at once upon emergency to the new premises to supervise the change-over in working arrangements can be selected.

These key men must be people who are fully acquainted with all stages of the work which they will be required to control, since they may be called upon to be responsible for the training of new staff up to 50 per cent of the total strength. They must also be of the older ages so that there is a good prospect of their being available after the commencement of an emergency, at least until they have put their own particular work upon a full operating basis.

The remainder of the staff may be suitably divided up into "advance parties" and "main body." The function of the former is, of course, to accompany the key men so that a skeleton organization capable of dealing fully with the work is available at the new location; advance parties are also reduced to minimum effective numbers for quick mobility.

Each member of the advance party should be made responsible for the transfer of some selected item of material or machinery. Thus, many essential working records could be parcelled up for transfer under personal supervision, the method depending upon the mode of transport available.

Of the "main body," certain selected members might be required to stay behind to ensure that the messenger service from the old to the new locations, if one were necessary, functioned efficiently. The remainder might supervise the removal of the bulk of records or machines and equipment which it is desired to transfer, and eventually would make its way to the new location.

Matter of Transport for Personnel and Equipment

Consideration must also be given to the method of transport to the new location, and consultation with each individual head will probably reveal the best means to be adopted.

It may be, for example, that private motor-cars can be utilized and arrangements made for the whole of the essential staff to be transferred by this means. This, of course, will involve planning by areas or districts and co-ordinating arrangements between the occupants of each conveyance.

The situation will, however, be greatly complicated by individual intention as regards dependants. Thus, some mem-

bers of the staff may have facilities for housing their dependants with relatives in a neutral or safe zone away from their new location. Others, however, will wish to arrange for accommodation locally in order that their families may not be split up.

Other alternatives include the mobilization of the firm's own delivery vehicles for the purpose of transporting staff or the chartering of special trains for the removal of personnel and material. Whichever method is adopted, the suddenly accelerated demand for the means of transport is bound to cause delays for which allowance must be made in planning.

Safety Measures for Expensive Units of Equipment

Where a comparatively large organization using much expensive office machinery is concerned, it may well be considered whether it would not be advisable to duplicate all or part of such equipment at the new location to avoid the paralysing effect of the plant being completely incapacitated.

This contingency may, alternatively, be guarded against very considerably by dispersing machinery to widely

separated parts of the same building either as a permanent arrangement or an emergency measure.

Assuming also some delay in the removal of machines if left until the time of emergency, a suitable number of machines such as calculating machines could be placed in a strong room, so that a few at least vital and expensive units will undoubtedly be available.

If it is the custom to place all important papers in a strong room overnight, the staff may be drilled to the prompt removal during working hours of such papers and their deposit therein.

Steps should be taken to ensure the complete duplication, by one of the several methods described fully in the May issue of *BUSINESS*, of all essential records and the deposit and maintenance at the new location of such duplicates.

The extent to which the plans should be revealed to the members of the staff in advance is, of course, a matter for the individual management to decide, but complete and comprehensive plans should be tabled even though they are not generally made known.

The knowledge that full plans exist maintains the confidence of the staff. Some lead in the matter of National Service, having regard to the possibility of evacuation, might also be given.

Make Staff Plans Now, Against Winter Illness Absentees

From Miss E. M. McGEE

DURING the summer holiday season most office managers have to reorganize work to a certain extent in order to compensate for the temporary absentees.

Generally this is fairly easily done by studying the work and personnel in separate groups, according to the nature of the work involved.

Study Personnel in their Logical Work Groups

Thus, in the medium-size office, for example, the accounts people are taken as one group (or subdivided into more groups if necessary); the mailing department may perhaps be considered with the receptionist as another group; the switchboard operator may be counted in with the typists, and so on. But whatever arrangement is made the idea is always, of course, to secure an interchange of jobs that will ensure the whole of the work running smoothly during holidays.

But this work-rearrangement can be carried a step farther. Instead of considering it as a purely temporary and emergency measure to meet only the summer holiday period, why not orga-

nize it into a proper plan to meet the emergencies of winter?

With the thermometer well up above the seventies and sunblinds working full time everywhere, it seems funny to think of winter. But it inevitably comes round—that season of colds, influenza and other ills that deplete office staffs as surely as do the summer holiday rosters.

The paradoxical thing is, however, that on nearly all offices these onslaughts of winter descend, year after year, and catch staffs as unprepared as though winter ills were the very rarest phenomena.

True, in summer, office managers know in advance who will be absent on holiday at any given time, whereas in winter nobody can predict *who* will go down with some epidemic, *when* they will go down or *how long* the enforced absence may be.

Use this List as Basis of a Plan

All the more reason, therefore, to exploit the arrangements made during the summer for job-substitutes.

For example, who runs the telephone switchboard when the regular operator is on holiday? Similarly, who substitutes



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The ready accessibility of raw and semi-manufactured materials of all kinds and an immediate consumer market of nearly 15 million people within a radius of 75 miles form the nucleus from which is assured the future prosperity of any new industrial establishment. Many widely different industries have established their factories in Lancashire and have proved the adaptability of the skilled and unskilled labour which is available.* The geographical position of Lancashire has given her many natural (and strategical) advantages which have been supplemented by the creation of great seaports, inland waterways, a network of roads and railways, airports, efficient public services, with the result that Lancashire offers industry the ideal combination of these facilities.

Civic administration and all commercial services are highly developed and it is a significant fact that over one third of the country's total exports leave Lancashire ports. Factory sites are available to meet every need, and there are spacious and well-constructed factories for rent or purchase at attractive prices.

Inquiries for further information and expert advice on the available factory locations are treated in strict confidence.



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 78 Leidschestraat, Amsterdam.

for the mailing clerk; for various jobs in the accounts department; for the petty cash clerk; for the different categories of typists; for the receptionist; for the filing, and so on?

Obviously, the people who do that "doubling" successfully for the holiday period do know something about the work. If the office manager, therefore, drew up a proper list of these "doubles," much of the winter disorganization would be automatically avoided.

Of course, a really bad winter epidemic may well cause more staff to be away at one time than is permitted to be the

case during summer holidays.

In such cases temporary staff may have to be hired from outside. Every effort should be made, however, to have the outside people take over work that requires as little "teaching" as possible.

A staff depleted, and therefore overworked, has little time available for teaching strangers. Keep your own people, therefore, as much as possible on the key work and put the outsiders on to routine.

As it is impossible to forecast *who* will be absent through illness, there is everything to be gained by office man-

agers ensuring that each member of his staff becomes as versatile as possible. That is, that each person gets at least a nodding acquaintance with as many jobs as possible. By this arrangement, no matter who becomes an absentee (even the office manager himself), *somebody* can be found who can intelligently carry on.

As I said just now, summer is still here. But summer is the time in which to start making plans for winter. When the dark, cold days—and the 'flu—arrive, it will be too late to improve on the unsatisfactory scramble of last year.

Six IDEAS from Other Busy Offices . . .

A Form's First Cost Is Not Its only Cost

"A FORM may cost the merest fraction of a penny to produce, but it may cost pounds to use," is the effective, cost-cutting watchword of the executive in charge of a big office using scores of thousands of stationery forms a year.

This executive employs a full-time subordinate, who is skilled in the paper and print business, to keep an eye on all forms and to "vet" any new ones that come up for consideration.

"A form is not finished when we know its cost from the printer," says this executive. "We consider it from the point of view of what it costs to use it, distribute it, file it, refer to it and file it again.

"An inconsiderately designed form may involve dozens of typists in dozens of needless operations. Imagine how that slows down the output of a big department.

"A form of an awkward size complicates distribution and messes up the filing, again slowing down work. Before we pass designs of our forms, therefore, they are all tested against those requirements. The plan has saved us enormous sums in wasted labour and time."

Writes on Celluloid

WITH MORE and more use being made of clear celluloid the difficulty of writing on this substance becomes more noticeable. Latest office accessory is now a special "pencil" which writes clearly on any of these surfaces. The pencil, or rather crayon, can be had in black, white, or colours.

Railway Chair Banishes Fatigue

TO FACILITATE the operator's use of a big battery of visible index trays which line the 20 ft. long wall of the statistical department, one firm's own engineers mounted the girl's chair on rails running parallel with her bench.

With a light push of the hand or foot she can now slide easily along to any required part of the index battery. Formerly she had to get up to move her chair or leave the chair altogether and walk to the necessary point and stand while she made the reference. The new arrangement has almost completely banished fatigue.

Controlled Stationery Cuts Down Office Costs

IT IS DIFFICULT to make office employees cost-conscious where materials are concerned. In the factory spoiled metal, etc., is so obvious that it catches the management's attention at once. Also it is easier to educate workers in

such expensive materials to the need for being cost-conscious.

In the office where it is just a matter of paper, carbons, and so on, the point of cost is not so apparently striking. Yet heavy costs are involved, and waste here is equally to be avoided.

One way of doing this is to make each clerical department carry its own cost of materials by having its stationery and supplies charged direct through an inventory control account.

The supplies should be carried in a central store and issued only against properly signed requisitions.

By careful watch over the consumption of stationery, "normal" quotas for each department can be set up, so that against these waste can be readily spotted.

Every item used in clerical departments, from loose-leaf ledger sheets to pencils and pins, can be costed in this way, and departments can be charged up weekly, monthly or in any way you like.

To bring home the facts to employees, and to make them cost-conscious, graphs of their expenditure can be displayed; talks on the subject can be given by the office manager; bonuses can be given for record low points on the graphs, and so forth.

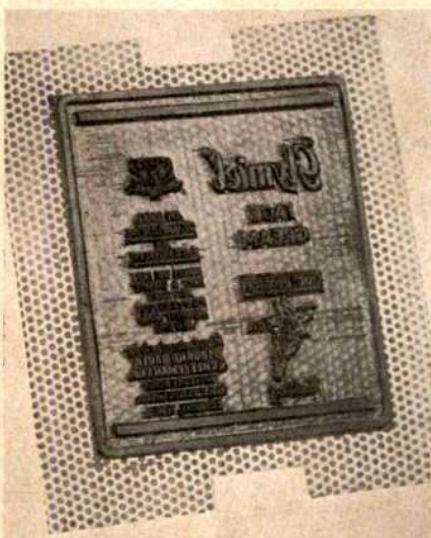
There are lots of ways of arranging the details, but the main thing is: let the office management get at the costs, then from this point employees can be educated into cost-consciousness.

There is still another important factor of this stationery control. By knowing the regular consumption of the various lines, buying can be better regulated.

When you Post Abroad

IN ONE FIRM that has a good deal of overseas correspondence the office uses special envelopes for letters going abroad. They are lighter and tougher than those normally used. In the corner where the stamp goes is a printed instruction: FOREIGN; stamp carefully. That warns the postal clerks.

On the envelope flaps is printed the full name and address of the firm, to facilitate return in case of non-delivery.



Many advantages are claimed for these rubber stereotypes made for use on "Multigraph" Duplicating Machines. Included in these claims are: substantial saving in first cost; less ink used; less wear on platen; rules and line work do not cut into paper, however thin; lasts as long as metal; can be used with metal type; half-tones give good results on all kinds of paper. The Editor will provide inquirers with name of the distributors of these stereotypes

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TYPE FN 4/II 'SIGMA' PUMP

THROWS 4 JETS TO HEIGHT OF 80 FEET.

This powerful and mobile pump, with the addition of a car to pull it, gives you a complete and efficient fire-fighting unit. Type FN 4/II 'Sigma' Trailer Pump delivers 350-500 gallons of water per minute and will throw 4 jets to a height of 80 feet. When necessary it will feed 8 hoses at the same time. For FOAM FIRE FIGHTING eight branch pipes will deliver 5,000 gallons of foam per minute. The smaller type 'Sigma' Trailer Pump MG 3/II performs equally well in relation to its size. Official

approval of our pumps is amply demonstrated by recent Home Office orders for 3,500 units. They are used by over 200 fire brigades.



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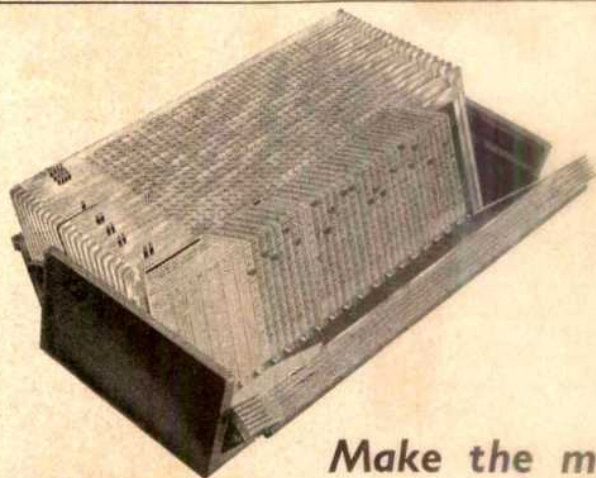
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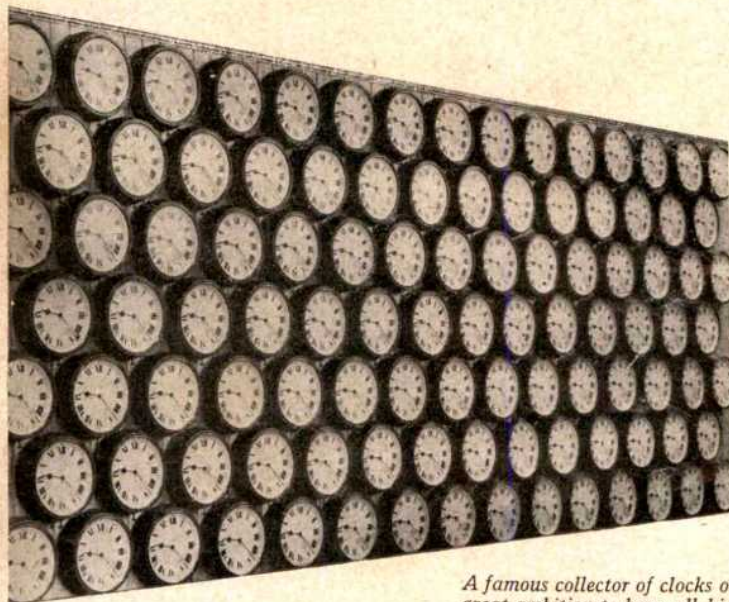
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When its Noon in Your Office
It MAY be 12.5 in the Works . . .

But NOT If You're 'On' Electric Time



PUNCTUALITY plays an important part in keeping down costs, and so maintaining dividends. But it can do this only as a cumulative effect, which means that everywhere throughout the business (in the office as well as in the factory) everybody must be "on time" all the time.

Inaccurate clocks is one of the most prolific causes of bad time-keeping amongst workpeople. Three minutes a day lost by employees through this cause will cost a firm £80 a year on a wage rate of only a shilling an hour.

In business organizations where departmental co-ordination is essential to efficiency the time factor is therefore of paramount importance, and the advantage of a common, unvarying time control is one of the things for management to consider.

Such control is afforded by Smith's "Sectric" clocks which take their movement from the time-controlled alternating current of the electric mains.

The Mechanism of These Clocks is Extremely Simple

The clocks consist of a small synchronous motor, a train of wheels, a dial and a pair of hands: they are as simple as that. The motor keeps in precise step with the pulsations of the alternating current, which is controlled at the power-station by means of a master frequency control clock kept true to Greenwich Observatory time.

Direct current mains will not operate the clocks. But few modern businesses are in areas where local authorities provide direct current, and as the grid network extends this number grows less. Domestic consumers are a good guide to electricity distribution, and in this connection it is interesting to note that out of over seven million homes wired for electricity in Britain more than six million are served by alternating current. And it is by no means a negligible

A famous collector of clocks once said it was his great ambition to hear all his clocks (over 200 of them) strike the hour of twelve simultaneously. He never achieved that ambition; no collection of spring clocks could manifest such accuracy. But 200, or 2,000, electric impulse clocks cannot vary a second between them. These few, on their test rack, are proving it

point to observe here that accurate, controlled time in the home is as important to the business man as controlled time in the office or factory.

Even the most expensive spring-wound clock is fallible, and in addition to the infallibility of "Sectric" clocks, once they have been connected with the electric main, via a light or power point, and accurately set, they never need winding or, indeed, any further attention.

Current consumption is negligible—1.5 watts—so that, with current at a penny a unit, it costs about a shilling a year to run one clock.

This system of time control has an important moral for all business undertakings where every hour, minute and

even second is becoming more valuable. A more careful preservation of time must precede its more efficient utilization if it is to mean more money.

Greater Productivity Makes Time Ever More Valuable

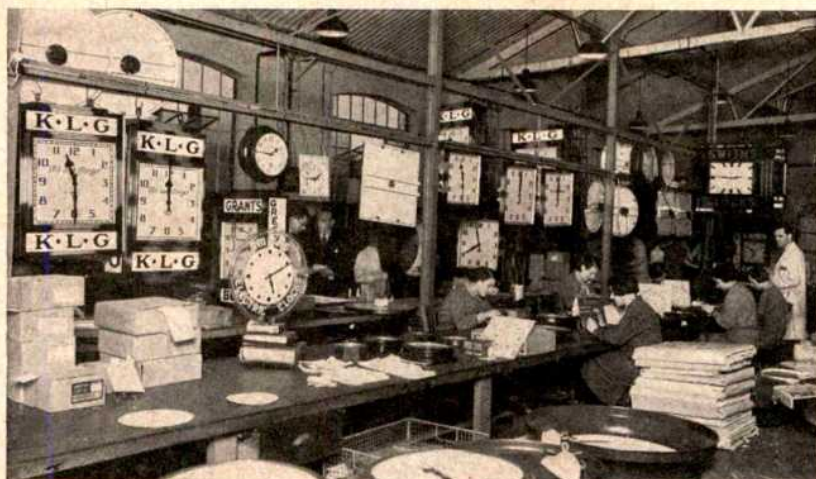
If every man's time is becoming more precious (as it undoubtedly is) because of his increasing productivity in a given period, the means of telling and checking time more and more accurately becomes an obvious necessity.

So Smith's have revolutionized the old idea of dependence upon one or two main clocks in a building, seen conveniently only by a favoured few.

Synchronous electric clocks can easily be installed in entrance-halls, canteens, in machine-shops, stores, showrooms, etc.—wherever there is work being done by people whose time has to be paid for.

Since all clocks so fixed invariably agree, nobody wastes time comparing one with another or (human nature being what it is) steals odd minutes with the excuse that some particular clock was thought to be fast or slow.

In conjunction with controlled time the employer will be wise to consider time-recording controlled from the same master-source. In a future article, therefore, BUSINESS will describe electric time-recorders as the logical equipment to make still greater use, as a cost-saving factor, of the advantages of "Sectric" clocks.



In the publicity field Electric clocks have another wide application. This corner of Smith's factory shows some of the models produced for famous firms

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AN AIR PUBLICITY MESSAGE *outside* WILL PRODUCE BUSINESS *inside*

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gives the maximum output to cost-ratio.

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is specially strong to resist metal type without cutting up.

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is available in all colours or combinations of colours.

5
does not dry out.

6
gives up to 25% extra saving if used spools are returned.

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pleases the typist and the principal.



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Continuous Form Billing in addition to regular typing

YOUR typewriter actually does the work of two machines when used with "Fanfold" Continuous Form Adapter, because the many time and money-saving methods of the Continuous Form Billing Machine are added to all the advantages of regular typing.

"Fanfold" Continuous Forms typed over our Attachment effect savings in Billing time and costs, ranging from 17% to 78%, without affecting the operation of the typewriter for regular correspondence and other purposes.

"Fanfold" Adapter places no strain whatever upon the typewriter carriage; because of the very simplicity of construction and operation there is nothing to get out of order.



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Elimination
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Steel frame and steel tubular base. Well-padded seat and backrest. Supplied in either Rexine or Moquette, with either Domes, Castors or Rubber Feet on the legs.

Adjustable for height of backrest.

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Patent **EVERTAUT** Locking Box keeps the legs perpetually rigid. Can be adjusted by a single nut.

Swivelling and adjustable from 17 in. to 23 in. from floor to top of seat.

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FOR the business executive this is not merely a magazine made up of some interesting editorial pages, plus a certain number of advertisements. On the contrary, every single one of the forty odd pages of *BUSINESS*—including even the covers—is literally packed with ideas and information.

In the articles we tell you about the problems in other businesses and explain the methods by which other executives—busy like yourself—solve those problems. The advertisements are complements to this information, they show you the types of equipment and the services that enable those methods to be used. The whole of *BUSINESS* is, in fact, a liaison between "ends" and "means."

ONE of the greatest problems of nearly all executives, of course, is how to find time, personally, to do more work. This month we've no one editorial article providing this solution, but a dictaphone, described in the advertisement on page 1, goes a long way in this direction.

TIME, too; yes, and accuracy, are factors you have to consider when it comes to Stores Control. You can easily lose money through too-high stocks, work held up through inadequate stocks, losses through pilfering and so on. The control must be error-proof, and it must be simple. Have a look, then, at the Cope-Chat system on page 25.

"THERE he goes again, does he ever do any work?" that's a remark not infrequently made about the employee who so frequently leaves his desk to fetch this or refer to that. Salaries and wages are paid for work, not for walking about. Shannon have tackled that "walking-about" problem. We show you the solution on page 21.

ALMOST every month some new development in machine accountancy is brought out by the National Cash Register Co., Ltd. In a single advertisement the range and possibilities of even one of their machines cannot be adequately described, but there's sufficient on page 6 to whet the appetite of any executive bent on improving the speed and accuracy of his accountancy department.

CLEAN fresh air, wide roads for fast traffic, proximity to the centre of London: they're important benefits if you are thinking of moving your business from crowded city confines into some place where you can expand. The Laing Estate out at Elstree, specially equipped as an up-to-the-minute factory site, is worth attention. Map and further details on the back cover.

YOU'VE heard of voice-writing? It is the ediphone system of recording. It makes you independent of stenographer, and a dozen times a day saves those valuable minutes wasted ordinarily while the human element is sought. Thomas A. Edison, Ltd., tell you about this, page 23.

WOULD it interest you if someone offered to give you better work and at the same time save you about £200 a year on the pay roll? Carter Davis, Ltd., do just that. On page 31 they tell you something about Continuous Stationery and how it can pull down those overhead costs.

THE season for new autumn mailing campaigns is approaching. There is yet time, however, to "vet" your machinery and methods in this department. Are you equipped for a better-than-ever start this year? Addressograph-Multigraph, Ltd.,

can help you here. See their announcement on the front cover.

CONTROL of H.P. accounts: that's a point that keeps many a business man awake at nights. Wouldn't it ease matters if your H.P. overheads were cut in half? Kardex have a method for doing this. On page 27 they offer you a booklet that explains how.

WHEN it comes to a matter of better cupboards, cabinets, shelving and so on there isn't much that "Art Metal" don't know. Their "New Standard" series is a pretty good line of stuff. Some of the models are illustrated inside the front cover of this issue, but take up their offer and write for the catalogue.

ON PAGE 44 there is a selection of useful things which might not have occurred to you. Taylors are well known for bargains. They'll send you their current list if you ask for it.

TO knock 50 per cent off the printing bill is a worth-while proposition for any firm. But then, of course, you want to be sure about quality, too. Just have a look at some of the work done by Rotaprint then compare the quality and the price. Rotaprint's address is on page 4.

WATCH the average typist juggling about interleaving carbons and you will see where the minutes go. Cut out this unprofitable fumbling and your girls start earning their money. Egry, Ltd., make this possible. See page 4.

THERE are few better-known makers of telephones than Ericssons. Their internal phones—on a purely rental basis if you like—literally bring every department to your desk. See page 2.

A MACHINE that simultaneously computes horizontal and vertical figures is a speed-up element in any book-keeping department. The Mercedes Addelektra does this. See page 2.

GOOD typesetting and reproduction are services essential to every modern business. Your publicity department understands this and will therefore be interested in Gee and Watson's announcement, page 33.

TIME was when you couldn't add much to a typewriter. To-day it's different. Imperials have a number of attachments designed to speed up the typist's work. See page 33.

IF business men only realized how employees' efficiency falls off as they get tired, seating would be given the attention it demands. Evertaut, Ltd., have studied this matter and offer now a new catalogue on office and works seating. Page 40.

AIR publicity is still a novel form of propaganda. Do you know the tremendous coverage it can make? Air Publicity, Ltd., have special booklets providing the facts. You can get copies from the address on page 39.

FOR A.R.P. equipment Sigmund trailer pumps are compact and efficient. There is one illustrated on page 37.

TO increase sales by 10 to 20 per cent is a useful achievement. J. W. Ruddock & Sons claim to be able to do this for clients by means of their postal advertising service. See page 3. Ruddocks, of course, are also well known for their special Record Books. See page 43.

PROOF of good printing can be established only by actual specimens. Bemrose

of 'BUSINESS'

& Sons, Ltd., invite you to criticize theirs. See page 43.

CALCULATING machines are not the monopoly of the accounting department. The individual executive or the statistician, too, can save his time and energy by using the Walther. See page 42.

WHETHER you need to ventilate and purify the air of one small office or of an entire building, Ozonair, Ltd., can do it for you. See page 5.

LANCASHIRE is still one of the most famous and advantageous centres for the establishment of a business. The excellent services, facilities and low costs offered by this site in North-Western England are fully set out in literature issued by the Lancashire Industrial Development Council, at the address given on page 35.

SECOND-hand office furniture is sometimes sufficient to fill a need. What is said to be the largest stock in England is held by the Office Equipment Co., see page 37.

FREE trial of a typewriter ribbon to prove its seven advantages is offered by Rikarbon, Ltd., on page 39.

SPECIALY suitable for stencil work is the claim made for Continental Typewriters. See page 35.

"INDUSTRY at Welwyn," is a new and attractive book offered free to any business man interested in the "Factory in a garden" idea for health and good work. See page 43.

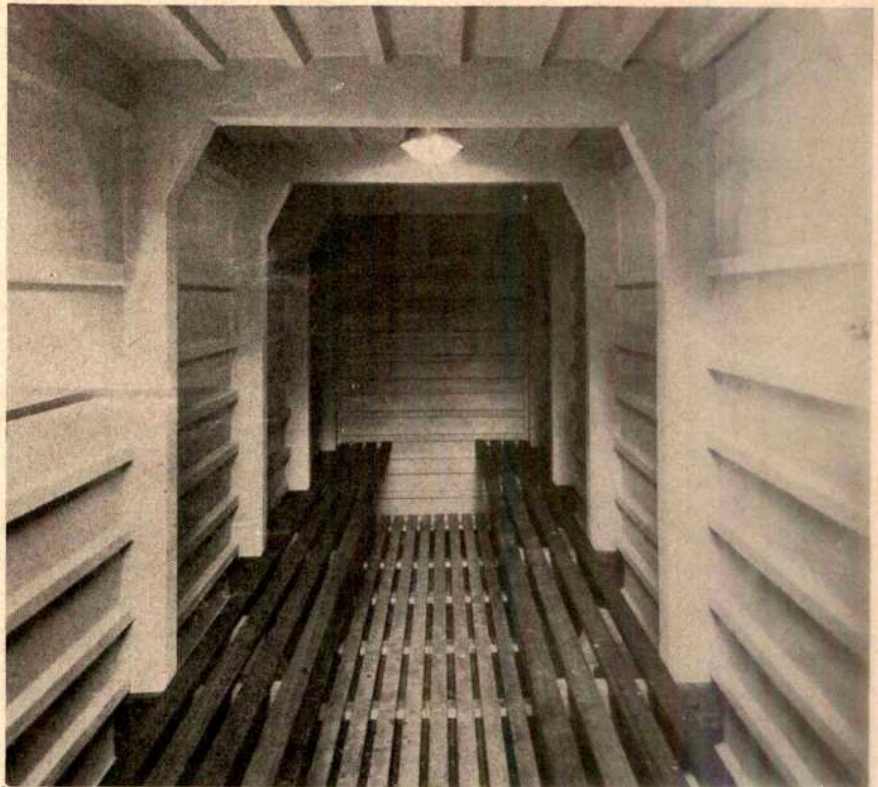
ABSOLUTE control of the time you pay for. Gledhill-Brook can tell you how to achieve it. See page 41.

IF you speed up one department it is folly to negative this result by permitting bottle-necks in another department. Carter-Parratt, Ltd., go into this question for you. See page 37.

THE Valor Co. invite you, on page 35, to write for their list of office furniture.

NO executive in charge of A.R.P. can afford to miss any information about the latest shelters and other protective equipment. Get the special catalogue from Constructors, Ltd., the key number is given on page 3.

To get one typewriter to do the work of two is possible by using Fanfold Continuous Stationery. See page 39.



DO NOT DELAY

Under the Defence Bill your plans for shelter construction should be in hand now.

The Concrete A.R.P. Trench shown complies with the Home Office Regulations.

When considering your staff trenches J. A. King & Co., Ltd., will be pleased to give you any information as to layout, size of trench and any other details necessary.

Early delivery can be given of the Standard 5' 0" and special 7' 0" Trench units.

The trench linings are designed by a well-known Civil Engineer and are protected under British Patents.

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The Patented **ULTRA LENS** is an **ELECTRIC SUPER-MAGNIFYING LENS** of the most modern type. Already it has won the warm approval of Business Men, Scientists, Technical Experts, all over the world.

For the close scrutiny of every conceivable object, metals, tools, fabrics, fibres, minerals, precious stones, paint, print, manuscripts, biological and botanical specimens, cutting edges, fractured surfaces, raw materials, and innumerable other purposes, the **ULTRA LENS** is invaluable, and presents in many instances hitherto unsuspected data, which can be used to advantage.

The price is £2-5-0 complete in case with spare bulb, battery, and transparent measuring scale.

Postage abroad, 2/6

Fully descriptive leaflet on request

The Ultra Lens Company

RICHARD BOCK

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of time results in increased efficiency, elimination of waste and makes every minute produce sixty seconds' worth of value. That's the way it always is when you install a Gledhill-Brook Recorder. Let us send you particulars.



GLEDHILL-BROOK
TIME RECORDERS LTD.
38 EMPIRE WORKS, HUDDERSFIELD



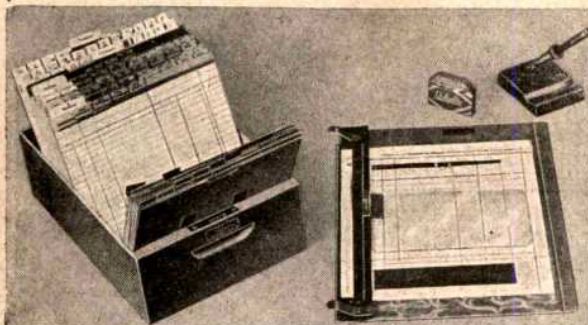


has long regarded it as a matter of course
to calculate by machine.
You should do the same; use a Walther
Calculating Machine and be up-to-date.

WALTHER
CALCULATING MACHINE
Carl Walther, Zella-Mehlis
(Germany)

Definitive ACCOUNTING

The advantages of Machine Accounting without the cost



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Launching a New Product

(Continued from page 20)

As we mentioned just now, these new milk-shakes when made in the home need agitating, like a cocktail. To make this process easy, and to eliminate use of a separate "shaker" (which means something else to be washed up afterwards, an important consideration in the average home), we devised a special cap for the ordinary tumbler. Thus, the tumbler itself can be used as the "shaker."

Free distribution of these caps was contemplated at first, but two points arose here. First, there is a class of retailer who might be expected to retort: "It is all very well giving the public something for nothing, but where do I come in?" Then again, it is

THE BOOM

How Big Will it be?

How Long Will it Last?

See Page 13

strange but true that the public have a much greater appreciation for something they have to pay for, no matter how low the price, than for something given away free.

We compromised, therefore, and charged the retailer for these caps at exact cost to us. The retailer, in turn, sells them to his customers at a penny each. In this way the retailer gets a small margin of profit and customers pay merely a penny for an extremely useful gadget. Both sides are satisfied.

The present season is our first summer with this product. So far, things are going well, but the height of the holiday pressure has yet to be experienced. We are anxious to see how our plans—and our product—stand up to the peak.

Here Are Some Of The Busy Spots

(Continued from page 18)

S. P. Austin & Son, Ltd., at Sunderland.

Recent orders with local firms on the N.E. coast for nearly 50 vessels of general trader type are valued at over £6,000,000.

Outlook in the shipyards has been trans-

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formed by decision of the Government to grant operating subsidy for shipping and to give financial assistance in one form or other for construction of new tonnage.

Apart from orders announced, nearly every yard in the area has tenders under consideration, and it is expected that many more contracts will be secured.

Swan, Hunter & Wigham Richardson, Ltd., Wallsend, have contract for a cable-laying ship. Wm. Doxford & Sons, Ltd., have an order for motor tanker of 10,000 tons for Norwegian owners.

By the end of June some 11,000 more workers had been absorbed in the ship-building industry.

Plans are in hand for setting up a works for stainless steel. British Stainless Steel, Ltd., have taken over the works of the Darlington Rustless Steel Co., Ltd., Albert Hill, Darlington, closed six years ago. The works will be reopened on a much larger scale than before. About £250,000 will be expended on new plant and machinery.

It is understood that an entirely new process, as far as Britain is concerned, will be employed in producing the stainless steel. Production should begin by end of 1939.

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FIRST of a revolutionary type of stratosphere air-liner is almost complete at Rochester, Kent. Top speed of over 330 m.p.h. is expected, and London-Australia with only three stops will be normal.

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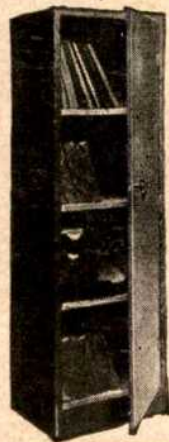
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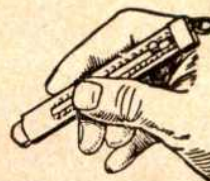
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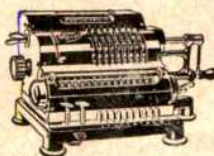
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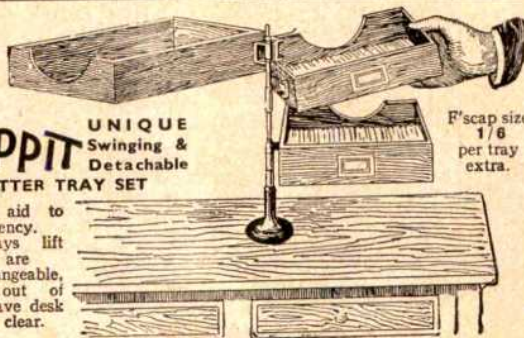
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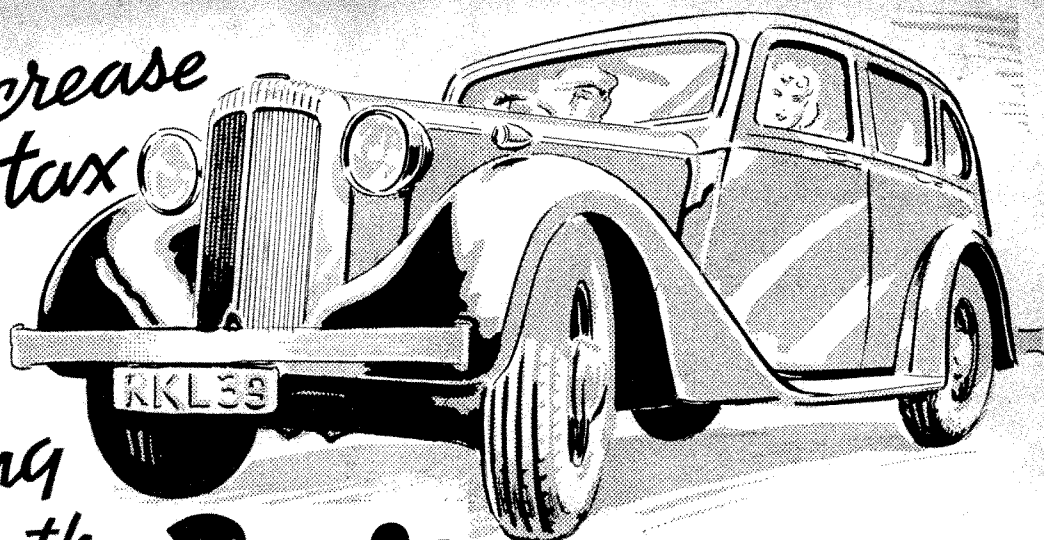
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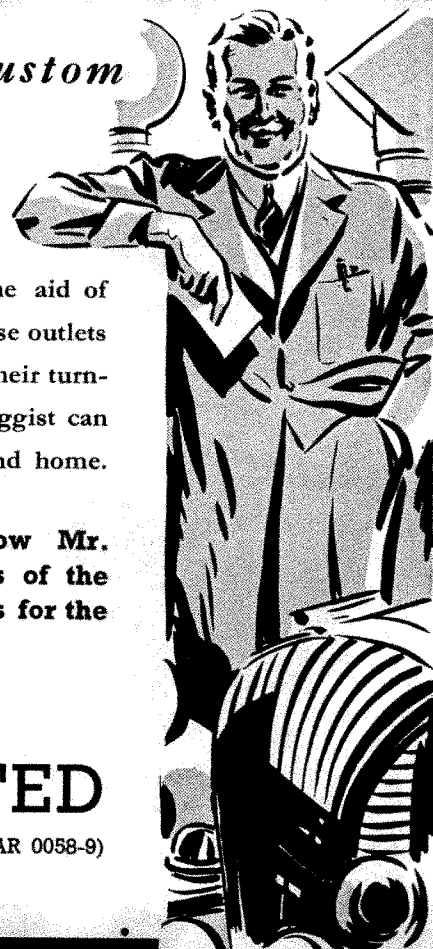
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AUGUST, 1939

Principal Contents and Features

*(Authors' names appear under headings of the appropriate articles throughout the pages)*Management : Control : Policy

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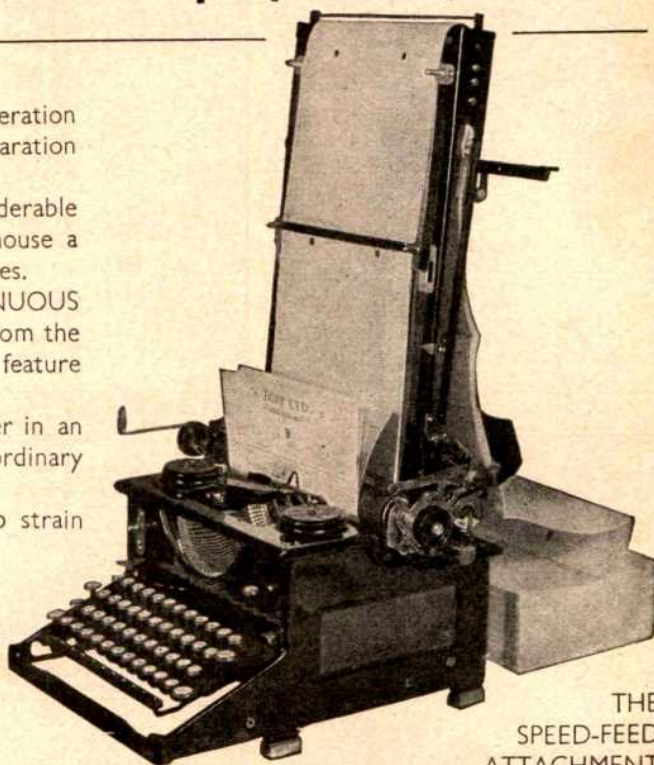
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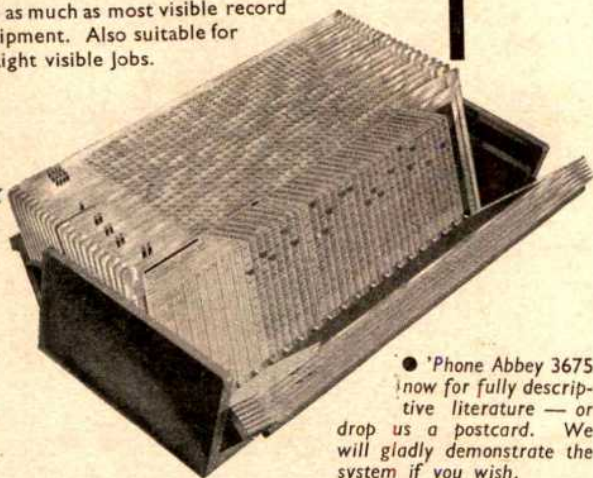
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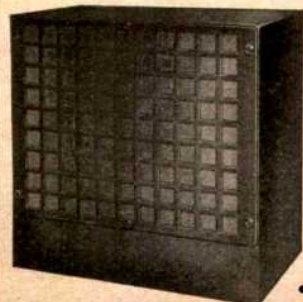
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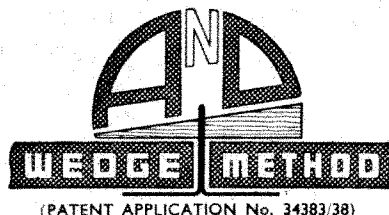
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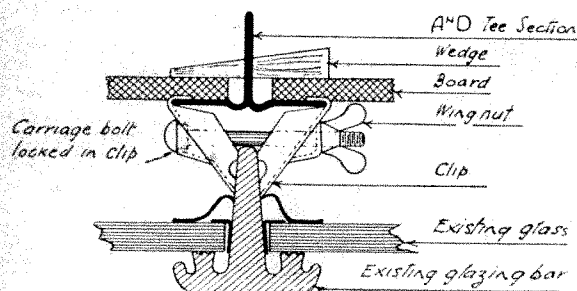
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A Serious Problem for Manufacturers will be this Hire Purchase Moratorium

SO much of the retail distributive trade of this country is done on a basis of credit sale or hire-purchase that the Draft Order under Section 2 of the Military Training Act, which proposes temporarily to relieve hire-purchase customers of their obligations, may well turn out to be one of the most unsettling factors that business has had to face for a long time.

Any impediment or complication put in the way of retail trading naturally reflects, quickly and powerfully, back along the line, through manufacturing activity to the very producers of basic raw materials.

A major point of any manufacturer's sales policy is, of course, to keep his retail outlets stimulated and running free of any obstruction.

No one, of course, denies for a moment the urgent need to safeguard the nation's welfare and to do everything possible for the personnel actively engaged in the country's service. Nevertheless, speaking as one of the very many manufacturers affected, this latest official measure propounds a new problem that will take a lot of thinking out.

In short, the position is this: Men called up to serve under the Military Training Act will be given, for the period of their six months' training, and for six months afterwards, full protection from any hire-purchase obligations they may have incurred before their training commenced. Moreover, this provision also covers guarantors.

Such a moratorium in favour of militiamen is, in fact, far more comprehensive than was anticipated by manu-

says R. L. JONES

Director and General Manager
Raleigh Cycle Co., Ltd.

who adds: *"In our organization we are moving to the policy of withdrawing all easy payment facilities to applicants of the age affected by the Military Training Order"*

facturers and retail traders.

It protects the hirer from the seizure of any property (e.g., goods obtained on hire-purchase) in the exercise of any right arising by reason of his failure to fulfil an obligation entered into before June 15, 1939.

Thus, not only can hire-purchase payments be suspended during the period of training (and for six months afterwards), but the hirer is under no obligation to return to the trader the bicycle, motor-car, radio set or whatever goods may be concerned, for storage during the period when payments are suspended.

There is not even a guarantee that the machine will not be used during this period, either by the hirer or someone else. The depreciation problem is, therefore, a serious one.

Moreover, the order grants similar protection for members of the Terri-



torial Forces who may be called up for training. In this case the moratorium covers the period of training and a similar period immediately following.

Already the practice has started in the retail trade of refusing to supply bicycles and other goods to young men obviously of the age about to be called up. And as, in the cycle and motor-cycle businesses particularly, young men of this

age constitute a big percentage of prospective customers, the stultifying effect on the manufacturing industry is considerable.

It is of no help whatever even if these young men produce guarantors in the form of parents or friends, because the guarantors, too, come within the scope of the moratorium.

Another practice that is starting is for the retail trader to insist that the hire-purchase of the bicycle, or whatever it is, be made actually in the name of a parent or senior friend who is outside the scope of the Military Training Act.

In many cases this arrangement can be carried out successfully, but by no means in every instance. But then again, at the moment of writing, I am not at all sure that a parent, even though himself the hirer, cannot claim protection under the moratorium if he can subsequently show that he suffers financially through the absence, say, of his son, who is the real user of the bicycle, under the Military Training Act.

Yet a further remedy some traders are trying is to reintroduce cash transactions. But here, I am afraid, the difficulties are enormous. Hire-purchase trading where such things as bicycles, motor-cycles, cars, radio, furniture, cameras, refrigerators, vacuum cleaners—yes, and even clothes—are concerned is so firmly established that to suggest cash down to a customer is, in by far the majority of cases, just the same as telling him to walk out of the shop.

Even among people who can afford cash down, this practice of buying certain classes of goods by hire-purchase is very deeply ingrained. If we really find, however, that the cash basis must be re-established wherever possible, the period of re-education to this principle will, I fear, be a rather sticky one.

In our own organization we are moving to the policy of withdrawing all easy payment facilities to applicants under the age affected by the order, though our final decision on this point will, of course, be based on statistics

which will follow operations under the new conditions during the next few months.

There seems little—if any—likelihood of an amendment to the order being made that would render it a business proposition to continue on the old lines, particularly for those manufacturers and financial houses trading on a national scale.

But even this is not all. We must also face the fact that in all probability the future will see the conscription age carried beyond the present limit of 21 years. This, of course, would call for still further drastic revision of this method of sales output.

The one bright spot of this problem—if there is one at all—is the general honesty of the average buyer on deferred payment terms, and whilst I do not think that the bad debt percentage on accounts already established will increase unduly, the average payment period will undoubtedly show a considerable extension in the future.

The Public's Integrity May Save the Situation

says H. A. GODDARD

Chief Accountant, Morris Motors Ltd.

IN most cases where young men have cars on hire-purchase they are guaranteed in some way by a person of substance. The object of this moratorium, however, is to prevent any possible hardship. Under its conditions steps cannot be taken against persons compulsorily called up *unless it is done by Order of the Court*.

Army authorities have notified persons compulsorily called up that no accommodation is provided for motor-cars, and that these should not be brought to camps. It is hardly conceivable, therefore, that a Court will allow a militiaman to retain and use a motor-car for six months or more without any payment being made.

It is the desire of the authorities that the parties should get together and settle matters between themselves, and it would be a perfectly fair arrangement for the motor vehicle to be placed in safe custody with the owner during the time payments are suspended. If a hirer would not agree to this arrangement, it is most probable that the owner would be able to get such an order made by the Court if he made application. There is certainly no hardship in the vehicle being in safe custody while the hirer is unable to pay for or use it.

There may be many cases where the hirer's position is such that it would not be any hardship at all for him to maintain the payments. In such cases, where means can be proved, the owners would have no difficulty in obtaining

an order from the Court compelling the hirer to maintain his payments.

It is obvious, of course, that much greater care will have to be exercised before contracts are entered into by persons who are liable to compulsory service. It is impossible to say how far it will extend, because no one can tell when fresh Orders may be necessary. However, there is no reason why supplier and prospective hirer should not make arrangements between themselves

as to what is to happen if and when he is called up. If this is done and the owner protects himself by getting a larger deposit and arranges for an extension during the period of service, subject to the goods being lodged with him for safe custody, there should not be much difficulty in obtaining an order from the Court for the enforcement of these arrangements in the event of the hirer subsequently refusing to carry them out.

The impression gained from the little experience so far obtained is that persons compulsorily called up have been very anxious to do all they possibly can to fulfil their obligations and not to take undue advantage of the recent legislation. More cannot be expected. Once again it will probably be found that the high standard of integrity of the average person in this country will provide the solution to a problem which otherwise might have very serious repercussions on business generally.

Trade May be Unable to Carry This New Burden

says S. ALDERTON

Managing Director, Alderton & Sons Ltd.

Well known Credit Tailors

UNDER Section 2 of the Military Training Act the credit retail trade is, in effect, being required to grant longer periods of repayment to the Militiaman and Territorial when called up. In many cases this extended credit amounts to as much as twelve months, and is a burden that appears, to us, too heavy for the trade to carry without serious results.

If further classes of men are called up in large numbers, credit retailers may be forced to refuse from any young men likely to be affected orders on an extended payment basis that they would otherwise accept.

As many young men depend on this type of transaction to purchase goods which are essential to them in their everyday working life, this limitation

will constitute for them a problem every bit as inconvenient as would be the maintenance of hire-purchase payments during the period of military training.

If, in addition to this, the men who may possibly be called up—either now or in the future—under this Order have to pay cash in cases where formerly they made use of credit or hire-purchase facilities, many of them will be forced to go without articles they require and which may be essential to them for their work. This, in its turn, will

*Read the
Important Article on*
**The Law About the
Hire Purchase
Moratorium**
Page 19

seriously affect retailers, manufacturers, and producers of raw material, through a decline in orders, and will increase unemployment.

The amount of credit and hire-purchase trade done in this country is so large that it appears to us that the suspension of liabilities of the men called up under the Military Training Act, with which, of course, we are in entire agreement, should be borne, through the Government, by the country as a whole.

IDEAS from other Executive Offices

When Will That Letter Get There?

POSTED UP in the office of each executive in a Midland firm we visited recently was a list, in big type, of 40 main cities of the world, with the number of days required for transit of letters from Birmingham (a) by air mail, (b) by surface transport to each of these cities. "When dictating letters you'd be surprised how useful I find that list," said one executive, remarking about it.

Handling 10ft. High Files

IN THE reference basement of one well-known firm steel cabinets of filing drawers, 10 ft. high line the walls. Access to high-up drawers is achieved by a platform-ladder; it runs on ball-bearing castors like those used by engine erectors in aircraft shops. Top platform of the ladder has rail round it (to prevent user falling off), and on top of the rail a ten-inch flat ledge (on which, if necessary, to rest stuff taken out of the files).

Directional electric lamps are at frequent intervals along tops of the cabinet, but each lamp has its own switch. User of the files can therefore have ample light, *when she wants*. By keeping the lights otherwise switched off current is saved.

For Your Next Guest Function

THE ITALIAN Air Ministry last month organized an international congress of aeronautical journalists. Commenting on the fact that every detail of the whole seven-day affair functioned with the ease and smoothness of perfect organization, C. G. Grey, Editor representing *The Aeroplane* said:

"Every morning each visitor received a formal card of invitation to the lunch or dinner party or whatever was the social event of that day. The peculiarity about these invitation cards was that instead of carrying the usual R.S.V.P., they assumed that the

recipient would attend the function, and merely carried a note asking visitors to let the organizers know if they cannot attend.

"That is an idea I commend to our own organizers. Instead of cluttering themselves up with a lot of acceptances, all they have to do is to make a note of any message they get saying that a person is *unable* to attend. Also it relieves the intending guest of the trouble of replying, and it prevents a lot of confusion and mistakes. To the layer-out of a banquet the guest who is supposed to arrive but does not turn up is preferable to the guest who is not expected and does turn up.

This reversal of normal R.S.V.P. might well be copied by organizers of business conferences, lunches or functions of any kind.

Takes Peak Load off Postal Dept.

"LETTERS signed after 5 p.m. will not be accepted by the mail dispatch department; you must make your own

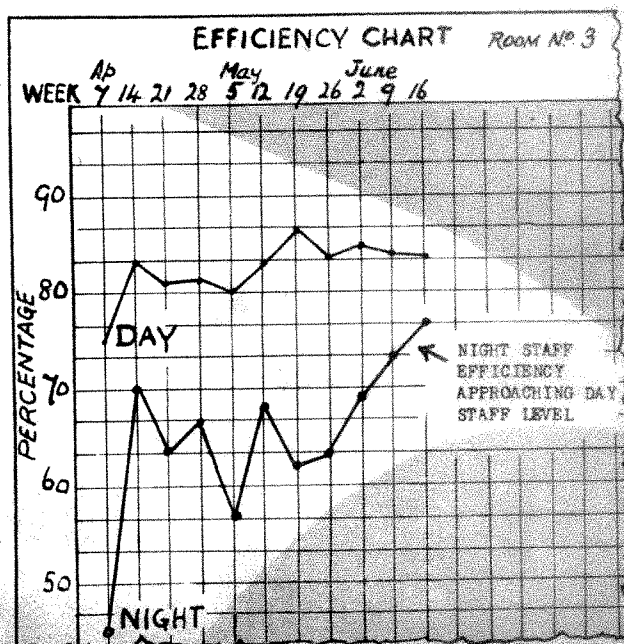
arrangement for their posting." This standing instruction, signed by the managing director and passed to all executives, has eased the evening peak load on the post clerks of a well-known firm. The fact that late posting makes executives find the money (temporarily at any rate) for their own stamps has also helped to kill their habit of holding up letters till the end of the day.

Typing Pool School for Executive Stenographers

USING THE CENTRAL typing pool as a training school for executives' personal secretaries and other specialized stenographic jobs is the useful method employed by one company.

This firm, in the engineering business, needs stenographers to be familiar with many technical and scientific words, phrases and figures so that before a girl becomes an executive's secretary she is given a grounding of at least two months in this kind of work in the pool.

Stenographers are given to under-



When this textile mill started double shifts the night work was far behind the daytime standard. Experts diagnosed the discrepancy as due to fatigue through inefficient lighting. The chart shows how lighting experiments, in the hands of experts, are raising the level of night work

stand that all promotions to the better and specialized stenographic jobs are made from this pool. They can therefore bend their energies accordingly.

The benefit of this plan to executives is enormous since they are never bur-

dened with a girl who halts, stumbles or commits errors over technical phrases. Letters and reports are clean and accurate. Thus highly paid time and tempers are saved from wear and tear.

When You Design Your Next Letter-Heading

See that some worth-while thought is given to the point raised in this criticism. It is quite important

TAKE your in-coming correspondence one morning, have a look at the letter-heads from the various firms and see how their telephone numbers are set out.

You will probably find that in not a single case is the phone number printed in type much larger than a pin's head. In most cases, too, you will find it put right on top of a similarly minute telegraphic address. At a distance of more than about 20 inches this jumble taxes all but the keenest eyesight.

One rarely needs a firm's telegraphic address; but often, very often, one wants the phone number.

Assume Smith & Co. have written you: you want to phone them back.

It ought to be easy to spot the number on their letter-head as you lean slightly away to pick up your phone.

But is that number easy to spot?

What you can see plainly is the predominantly bold lettering: "Smith & Co." But there is also a surrounding clutter of other type, in varying degrees of boldness.

This will state that Smith & Co. are the largest manufacturers in the world of this, that, and perhaps a dozen other things; that they are contractors to H.M. Government; that they are members of ex-service men's leagues; that they have showrooms, factories, branches in a dozen home towns and as many foreign places; that they use

this code and that code; that they were established in 1066; maybe they display also a list of directors; and they will have a line commanding you (though you pay it no heed) to address all communications to the firm and not to individuals.

All this blah and then, tucked away, and in the very tiniest type of all, the vital telephone number.

Before you can ring Smiths you therefore have to pick up the letter and study the heading at close range in order to discover and read what you ought to be able to see in a flash from the letter as it lies on the desk.

And do not let Smiths think they are getting away with a little subtle free advertising, that making you wade through a clutter of their virtues and assets. You are not awed, envious, or appreciative at all. You are just good and mad. "Why the h— cannot they . . ." and so forth.

Exactly; why cannot they put the telephone number where would-be communicators can easily see and read it.

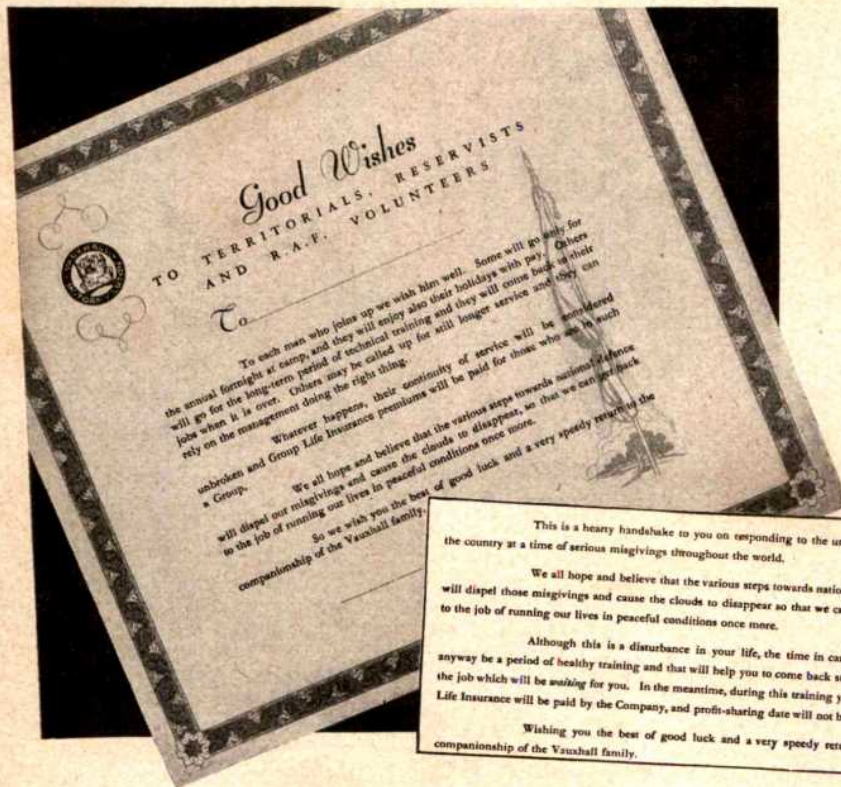
Woolworth's made nearly seven millions profit last year.

How? Mainly by making it *easy* for customers to do business. Counters right height, goods get-at-able, no steps in doorways, no upstairs to a department (where there is more than one floor you mount stairs only on the way back), no waiting, and so on.

Little things, one might say. Yes, but they are important enough to be planned by the top executive people of the vast Woolworth chain.

The telephone number on a letter is, perhaps, a little matter, but some big thought on it might discover its importance.

Make it *easy* for people to telephone you. Give the phone number a clear space on your letter-head, and print it so that the eye picks it up in a flash.



Employee morale at Vauxhall Motors, Luton, is notably high. Here's one reason (out of very many) why. Every Territorial, when he departs for training, is given the firms' good wishes and assurance of a welcome back to his job. This takes the form of certificate signed by the management. Militiamen, on being called up, receive a similar certificate, worded as in the smaller illustration.

In life, it's these *little* things that count: These courtesies, appreciative gestures between employer and staff, they do so much to build up that priceless asset, goodwill. At Vauxhalls, these gestures are not superficial; they are backed by genuine regard.

This Plan Builds Executive Reserve

A LARGE Middlesbrough store fosters understanding between its department heads and assistants by reversing their duties for one week each year.

The assistants are given full control, no interference whatsoever being allowed, while managers work as assistants.

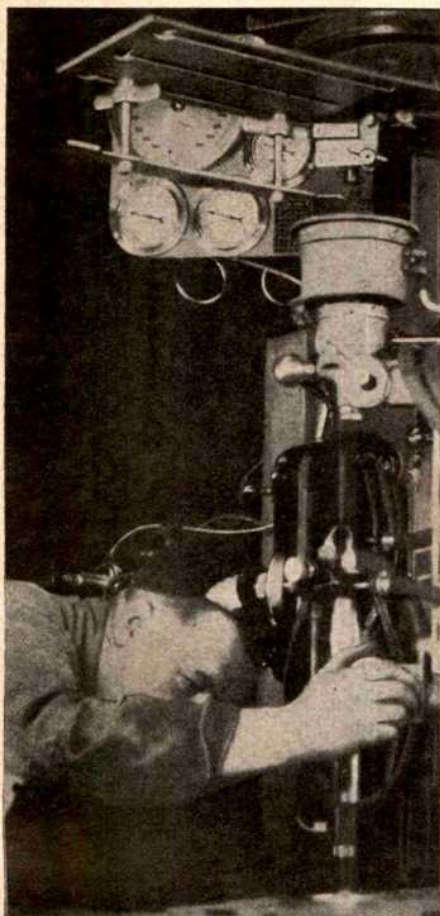
This makes the rank-and-file realize their "chiefs' difficulties. The young "managers" also invariably inaugurate some idea or economy that is adopted permanently.

The managers benefit from having once more to be nonentities for a while. They get fresh, salutary contacts with the public. And, as the scheme stimulates all involved, the store benefits by all-round efficiency. Perhaps the most important point of all is that assistants who are potentially good executives automatically come to the notice of the directors.

Putting 'Maintenance' on a Proper Know-the-Cost Basis

By C. W. BRETT, M.Inst.W.

Managing Director, Barimar Ltd.



THE right-down, rock-bottom foundation on which all really progressive business to-day is built is—knowledge of the facts.

By facts I refer here not so much to the bigger and broader influences that come from outside the business but those vital things, *costs*, which exist everywhere inside the business.

Costing, of course, is now established practice. Few business men disagree with it in principle, if they pretend to ignore it in practice.

Costing is an exact science, rigorously applied in many phases of business organization, yet hardly understood at all in other phases where it can be equally valuable.

For instance, every manufacturer has a costing system for the production side of his business. Production costing has a basis in the factory flow line; devising a system for this part of the works, activity is therefore a relatively simple matter.

But what about *Maintenance*: that is a vital link in production, yet how often does one find it properly costed.

Even in some of the best-known companies the costs summary sheets contain only one gross figure for maintenance labour and for maintenance materials, with no attempt whatever to do more than broadly analyse the maintenance payroll and stores accounts.

A vital fact to be stressed at this point is that costing cannot be effective if only

half measures are taken, and this for the following two reasons:

1. Optimum production at an economic rate is absolutely dependent upon efficient maintenance.

2. Production costs, to be true, must consist of direct wages and materials, indirect wages and materials, departmental and general overheads, etc., and cannot possibly be accurate unless the maintenance work has been properly costed and the costs properly allocated.

Why this General Low Level of Maintenance Costing?

These are unassailable facts. Why, therefore, is there, such a general low level of cost efficiency on repairs and maintenance in manufacturing firms?

Here again there are two main reasons. First, the difficulty (the falsely assumed difficulty, as I will explain later) arising from (a) the irregularity and wide diversity of jobs to be done; (b) the frequently experienced remote control of both men and materials caused by maintenance men being scattered wherever there is work to be done; (c) the continual outcry by every departmental manager for priority to be given to his particular repair work.

In the second place there is generally marked apathy and lack of co-operation by department heads with the costs department on maintenance costing or the control of work.

The departmental heads concern themselves with the technicalities of production; they care little for sight or knowledge of the maintenance men, whom they too often regard as a necessary nuisance.

The vital fact that production volume and quality depend on plant and machinery which, in turn, depend absolutely on adequate maintenance seems to be unrecognized.

Just recently I visited a large Midland works employing over 3,000 men on a fairly large range of products.

The firm had a costs office and a qualified costs accountant. They costed their production—in a way. But so far as maintenance was concerned they did not have even a plant inventory. They did not know the plant items to the nearest hundred and had no idea of the current value or expected life of any but a few major items. Break-downs were frequent; production was continually interrupted, and yet, owing to the haphazard distribution of the

maintenance labour, maintenance men were often found sitting on their backsides with absolutely nothing to do!

What, then, is involved in the proper costing of maintenance? It involves:

1. A proper plant inventory and valuation.

2. The correct recording of all time and materials.

3. The consequent economic control of maintenance materials (which are often more liable to pilfering even than production materials).

4. The correct allocation of these indirect charges to the production costs.

5. The collation of figures and data which, by analysis and comparison, could be utilized first for the creation of standards and, secondly, the improvement of those standards.

The whole purpose of this article will fail unless there is a realization that there is (a) a vital need for maintenance costing and the *proper allocation* of these costs to their appropriate responsibilities: i.e., to production accounts, plant history accounts, and so on; also that the maintenance cost figures can be used to justify wages and to control stores.

I have mentioned some of the difficulties of establishing a costs system for maintenance, but there are others: 1. The cost of getting the figures; 2. The lack of uniformity—as in production—and the subsequent lack of value of the figures obtained; 3. The delay in getting figures, rendering them of no value, being history instead of news; 4. The figures not being properly inclusive and therefore untrue.

Recognize this New Cost-Office Function

Although I recognize that these so-called difficulties exist, I still state quite definitely that even in the worst case there should be little real obstacle in the way of proper maintenance costing (and all that it can mean) if only those immediately concerned would try to understand the new idea of cost office functions.

This new idea consists of a simple costs system, wherein all the routine work is done by junior people. The senior costs people therefore no longer remain costs clerks: they become economy and efficiency ambassadors who will pick up the facts and figures from the juniors, analyse and compare them and

otherwise hold costs inquests—*before* the "burial of the body."

They then go out into the works and confer with department heads and works managers on production results, costs and the creation of, and improvement upon, standard costs. These senior men will then make a close study of the points discussed and will report back to the department heads their conclusions—always in a spirit of willing and educative co-operation, the final view being optimum economic efficiency.

How is this to be achieved? That is the next question, and here it must be said that it *can* be done; and it can be made simple, but only if there is the utmost co-operation between the managers in the works and the costs office staff. In this there are heavy responsibilities on the costs office people because theirs is the task of tactfully educating the works departmental managers as to the benefits which will accrue from a complete and thorough knowledge of costs.

Another part of the educational work will be directed to the promotion of the team spirit and a subsequent sinking of selfishness where the prior performance of maintenance work is concerned.

These Are the Things to be Guarded Against

This is a real problem and one often experienced. Let me quote an example which occurred in a very large engineering works in the North.

There are certain direct charges for which the department managers are responsible and certain indirect charges for which, although they are responsible, they cannot altogether control. Each departmental head had his own maintenance men and would not agree to any other arrangement, although this often meant that four sets of, say, fitters may either have little to do or be actually idle at one and the same time. There was no planning or real plant inspection system.

Here there are four main departments through which the raw material passes before it becomes a finished product.

Then there were certain services which were common to all departments. For years the cost of these services had been assessed in a way which was found afterwards to be hopelessly wrong and bore no actual relation to the usage of the service by the department concerned.

Investigation suggested pooled labour and a revision of the method of apportioning the indirect charges and service costs, but because these alterations would mean amended costs—in some cases higher and in some cases lower—the managers concerned were against the idea of changing.

For years they had been working on figures which bore no relation to facts, and yet such was their so-called interest in *low* costs that—in the cases where the truth meant higher costs—they preferred fiction.

Educational measures were taken which resulted in the team spirit and the acceptance of true costs as a proper basis on which to make improvements.

These true costs were expressed in terms of sterling and also in terms of unit output cost and are to-day regarded as progressively reducing maximums. It has been realized that the narrow departmental viewpoint is wrong and that the aim should be—as it now is—a satisfactory *total* production result, both output and cost.

The next step is to revise the cost summary headings to ensure a proper goal for all costs details. This cannot be too strongly stressed, as it is of the utmost importance to establish proper cost headings.

Next the whole of the jobs it is possible to do must be linked up with their appropriate cost headings, and this includes the creation of a *complete* list of jobs and a thoroughly *complete* plant inventory.

The greatest co-operation with depart-

mental managers is essential here, and the more care taken at this stage the greater the simplicity and efficiency of the system and the more valuable the resulting costs data.

Reduction to Simple Coding

The next stage is to classify materials and labour, and then comes the all-important task of providing a really efficient but simple coding method to cover:

A. Cost Headings or Department.

B. Jobs or Plant items or Operations.

C. Labour grades (Occupational).

D. Materials (Raw and Consumable Stores, etc.).

E. Services and indirect charges.

Once this has been done the rest is easy.

[To be continued next month.—Ed.]

"Blame a Man, Spoil Him . . ."

TO err, says the proverb, is human; to forgive, Divine. In competitive, high-speed business many say there is but small place for sentiment. But they are wrong, those cynics. There is a lot of room in modern business for . . . well, let us not call it sentiment but right thinking, or just good common sense.

When, in the office or the factory, some mistake has occurred, costly or otherwise, it must be corrected. That is obvious, but is it necessary that somebody "must be made to pay for it"?

No, says the right-thinking executive.

The employee who is hauled up on the mat when his error is a perfectly genuine one resents blame, censure.

It is more than probable that his intelligence has already shown him the full significance of his action. He appreciates that it must be corrected.

But to censure is to blanket a man with an inferiority which may be quite unmerited. It is also an affront to his natural dignity. It engenders a resent-

ment that is not at all to his employer's interest.

The victim may believe, too, that the departmental head would have been unaware of the error but for the fact that someone "sneaked" on him.

That, again, fosters ill feeling among staff workers, with a resultant and quite inevitable deterioration of all that is implied by that valuable asset—"good team work."

It is a psychological matter.

But no reasonable man resents *correction* or instruction, and the result achieved is the same. The error is corrected, without those unpleasant insidious repercussions inseparable from a "have-him-on-the-carpet" policy.

The reasonable, constructive-correction attitude will kill "sneaking" and its subversive undercurrents. It defeats those conspiracies of silence designed to keep from the management facts about untoward, but often highly important happenings where work and materials are concerned.

Jobs Are Not Guaranteed

AMONG business men there will be few dissentients over the government's moratorium for Militiamen who have hire-purchase accounts running.

The bulk of Militiamen will have only their army pay during the six months' training. "No one can expect a lad to be able to pay much out of *that*," as one of the big credit retailers put it to us.

So while accepting in good spirit the six months' grace, despite its inevitable braking effect on the free-running of retail outlets, some manufacturers have, nevertheless, criticized the additional six months' relief which the Order provides.

"After all," a camera appliance manufacturer said to us, "these chaps are guaranteed their jobs back again when

Training's over; I don't see why they need this other six months."

But here's the point: Militiamen are *not* guaranteed permanent reinstatement in their jobs.

The official ruling says they shall not be dismissed *because of their being called up to serve*. That's a totally different matter.

If, after completing his training a man rejoins his firm there is nothing whatever to prevent the employer serving him with notice next day on account of reduced business, or other legitimate grounds, rendering his services unnecessary.

It is the object of the extra six months—and still further time at the discretion of a court—to protect the Militiamen against this contingency.

THE TREND OF TRADE

Marketing—Advertising—Selling

It's Time to Start Building Up Those *RESERVES* Again

AS nothing succeeds like success, so nothing booms like a boom, even a distorted one. Practically every business index is soaring at the moment, with the solitary exception of raw material prices.

Employment rises by 140,000 per month. We have now about 14,000,000 insured workers in jobs—a figure never before approached. Even though Whit-sun fell in June last year, the rise in retail sales by 9.1 per cent is remarkable. It shows that consumer buying power is still increasing.

Steel continues to hit new high levels: output is now around 93 per cent of capacity. However, the big surprise of the month is the rise in car registrations in spite of the increased h.p. tax. May was the first month to evidence the effects of the new brake; a heavy fall in sales seemed certain; actually car registrations rose by 15 per cent over last year.

Effect of Tax On Car Sales

WHEN we remember that last year's car sales were breaking records, this evidence of purchasing power becomes almost staggering. It is true that the tax has hit the sales of cars rated 17 h.p. and over. Indeed in May they represented only 5.5 per cent of the total new cars sold, as compared with 7.1 per cent in April. But that was foreseen.

The rise is almost entirely due to the 8 h.p. and under class, which leapt by 69 per cent. Before the steepening of the tax the excess of such sales over 1938 was but 28 per cent.

Here we are in the face of an economic portent. First there is clear evidence of higher purchasing power in the lower middle-class. Obviously more wage earners with an income of £6 to £8 a week are buying a small car. Next, a large number of people who would have bought a 10, 12 or 14, or even a 20 h.p. car contented themselves with an "eight."

Further, there must have been a number of postponed sales, due simply to the announcement of the tax which has been held up during a year of uncertainty.

But there was another element in the situation. If the spring of 1937 saw the battle of the "tens," this summer has seen the battle among the "eights."

CECIL
CHISHOLM
M.A.

says:

The soundest policy for to-day is to make the most of the present boom in the mass market or of armament orders. . . The time has come to rebuild those reserves. . . . Even an armament boom does not go on for ever



Austin, Morris and Standard have all launched new 8 h.p. models far in advance of previous values.

In to-day's market, with money to spend, there is a nervous desire to hoard. The never-failing ingenuity of the motor trade staged one of the biggest victories in their history. The moral for all makers of luxuries and semi-luxuries is obvious.

Confidence Weakened By Nervous Tension

THERE is, of course, the other side of the picture. This country is now an armed camp. During August mobilization will be virtually complete here, in Germany and in France. Poland has been fully mobilized for months. Belgium and Holland are mobilized to a lesser degree. Our own unemployment figure is assisted by some 550,000 men in the armed forces, apart from the 120,000 militiamen constantly in training. Under these circumstances eddies of nervous tension are almost unavoidably with their inevitable destruction of confidence.

Thanks to Government orders, coupled with more civilian buying,

the woollen, cotton and linen industries are slowly improving. The rayon trade is enjoying a revival of exports to the Empire, shared to the same extent by the cotton trade.

Brighter Outlook For Shipping

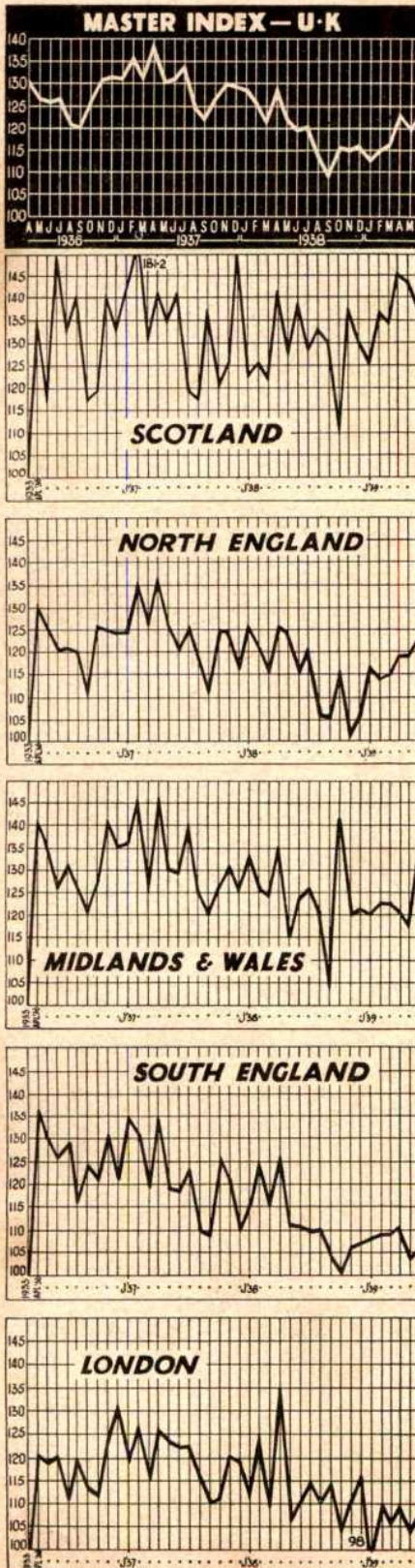
THANKS to Government's subsidy to the tramp lines, the shipyards will shortly be using more slips. Work has not yet started on the 750,000 tons of new shipping ordered since April. As soon as the Board of Trade has decided on the regulations for the application of this subsidy, work will be begun. At least half of the reduced capacity of our shipping yards should be employed.

Even the coal trade shows improvement, due to heavy exports, and larger quotas have been awarded to the districts.

Nor is the fall of housing plans so serious as was to be expected. In June, total building plans declined by only 12.2 per cent from last year. This drop is accounted for by the drop in housing plans of 29.2 per cent. The total drop was only around £1,057,000 thanks to a

REGIONAL ACTIVITY

Study these graphs. They show the level of business activity in every area of the U.K. and provide a guide to the trend of business from a long-term viewpoint.



rise of 66 per cent in factory plans and 40.4 per cent in shops and offices.

Passenger Traffic Still Lagging

RAILWAY traffics are up by just over a half of 1 per cent over last year's figures. This is due (a) to coal, and (b) to industrial traffic. Unfortunately passenger traffic still shows no improvement.

Germany's Improved Technique

GERMANY'S last increase in production (10 per cent over last year) seems to have been partly achieved by improved technique, and partly by the employment of 600,000 women and girls in industry and agriculture for the first time.

But the basic reason why we need

EMPLOYMENT INDICATOR TO TRADE ACTIVITY



fear inflation less than hitherto, is our improved technique for dealing with it, coupled with the increased output per man and machine which is being achieved in almost every industry to-day. Inflation cannot occur where there is production to balance expenditure—even expenditure on armaments.

That technique includes a new conception of handling an adverse overseas trade balance. In spite of shortages of men, materials and exchange, Germany, Italy and Japan all improved their export totals last month. They did this by the simple process of subsidizing loans to customer countries, of barter, of subsidiaries to either customer or supplier.

As the best market available to America, to Scandinavia and the Empire countries we have a lot of business to make up in balancing our purchases and sales. Already we have economic and political loans and credits sanctioned against goods to Rumania, Poland and other friendly states to the sum of £60,000,000. Further, the Overseas Department has just put another £75,000,000 at the disposal of traders for the guarantee of overseas bills. Under these conditions our present adverse balance of around £145,000,000 per annum should be easily taken care of.

Problem: Men and Materials

MOST serious of our problems eventually, may be that of men and materials. We have the men, but in the wrong place.

The Ministry of Labour gives a series of instances of the problem. From these figures it is clear that the high percentage of unemployment in the special areas and in the north is by no means due solely to such depressed industries as cotton and coal. When an industry flags, all the local trades depending on it flag too. In these industries there are reserves of all types of labour, including the consumer trades, building and services.

The difference in unemployment in 40 per cent of a wide group of industries between the worst and the best is over 20 per cent. Here is a reservoir of labour as yet untapped, simply awaiting ingenuity to make it available.

Shortages of selected materials greatly used in armaments such as steel and copper there will certainly be: but failing a great improvement in the United States, there is no reason to fear permanent shortages or uneconomical prices.

The U.S.A. Best Yet

NEWS from the United States is the best for many months. Following a rise of 11.2 per cent in steel orders, Wall St., staged a come-back that outlasted the usual forty-eight hours. Industry and the stock-markets seemed to react to one another's enthusiasm. It remains to be seen whether this is a

genuine return of confidence, or whether the next political flutter will undo the good work.

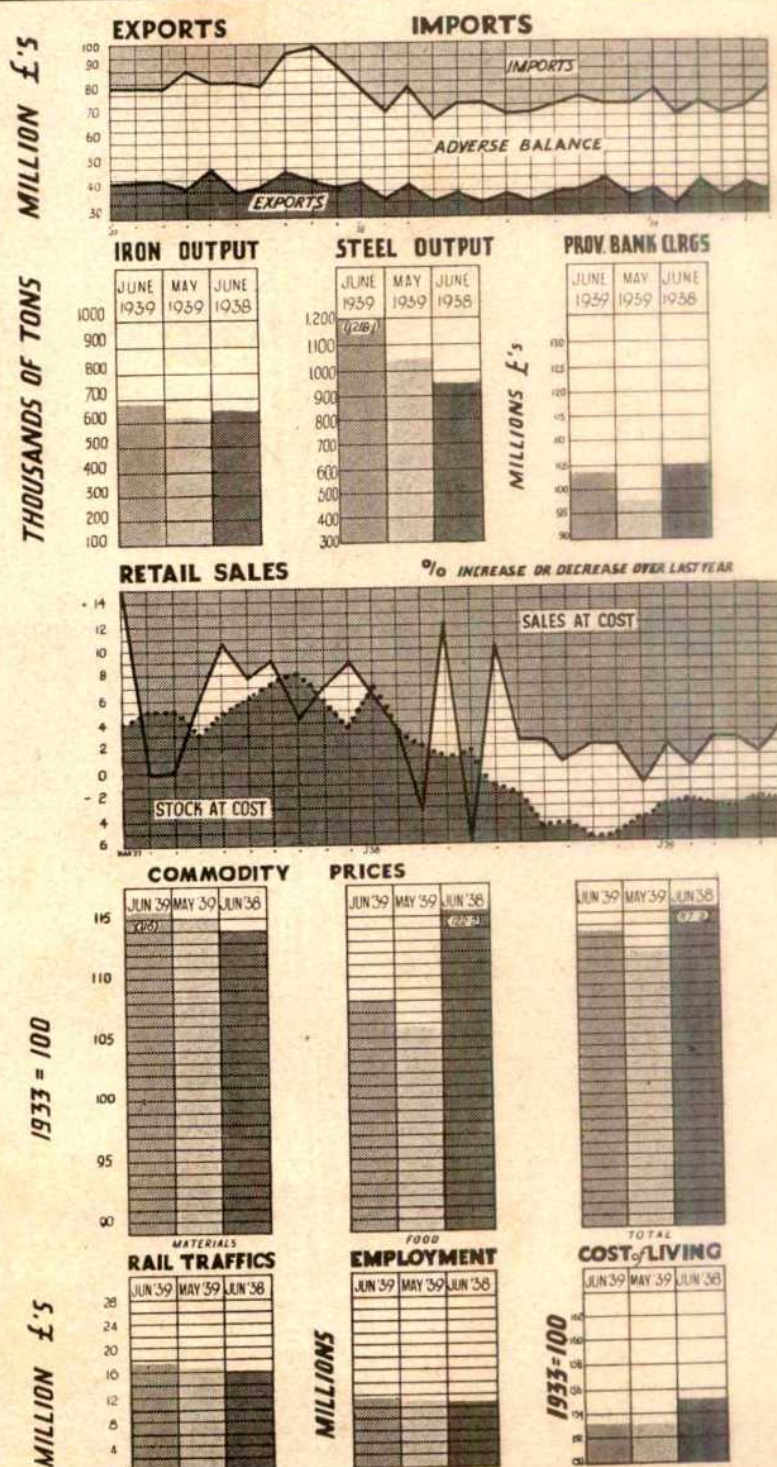
Improvement in France continues apace and is affecting the country's entire economy. In Scandinavia business remains steady. As is well known, the one industrial trouble of the Axis powers is lack of man power and of materials.

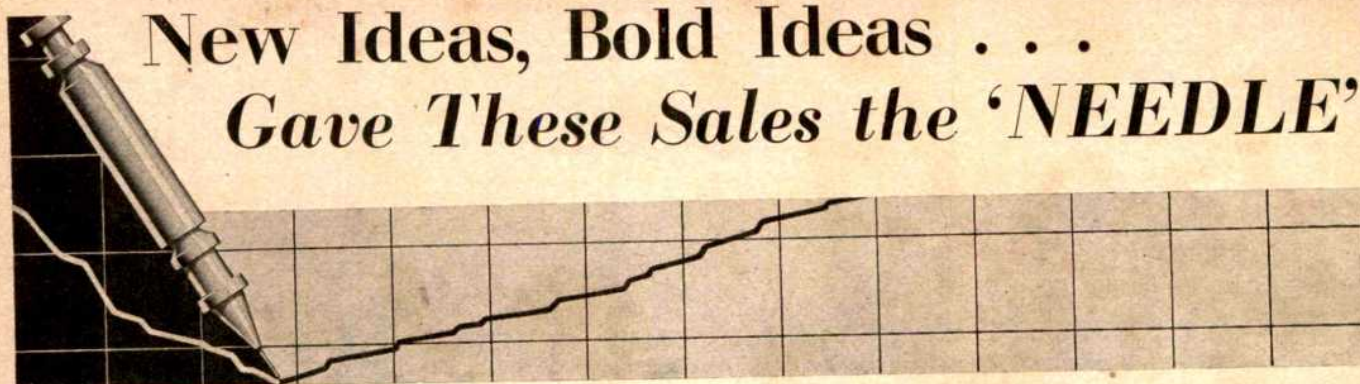
The Empire presents a more varied

aspect. Australia shows a slightly decreased trade balance for the year. Queensland has achieved its first revenue surplus since 1927-1938. New Zealand, too, enjoyed a favourable trade balance for the half-year. Canada still suffers from the plight of her great neighbour. However, exports to the United States are rising, and, indeed, Canada's export trade as a whole is improving.

GUIDING FACTORS IN THE TREND—

All comparisons are with similar month in last and previous month in this year





New Ideas, Bold Ideas . . . Gave These Sales the 'NEEDLE'

SCIENTIFIC research that overcame immense technical difficulties, a keen perception of the needs of a luxury market, courage that dared to modernize the most conservative trade of all—these are the factors that have led to the amazing success of the "Minipiano" and now promise further radical changes in the tradition-steeped pianoforte trade.

In five years the makers of the pianette "Minipiano" have persuaded hide-bound distributors to accept fluidity in piano design and to regard the piano, not only as a musical instrument but also as a highly decorative piece of furniture which should harmonize with current home fashions instead of jarring with them.

Revolution was Not Inspired by a Tyro

Probably the most curious fact about the whole thing is that this revolution was not the work of a newcomer to the trade, an iconoclast with no respect for the achievements of famous instrument makers of the past. It is the work of a firm with more than a century behind it, a firm that made harps in the distant past, a firm with the largest pianoforte factory in Europe—W. G. Eavestaff & Sons, Ltd., of Harringay, London.

All the world knows that during the nineteen-twenties piano sales steadily declined. When this decade opened they were at their lowest ebb. When radio was born the death of the piano was prophesied; sales figures seemed to bear out the gloomy forecast. But Mr. R. P. Brasted, managing director of Eavestaffs, saw further ahead. Radio, he thought, would cultivate a wider love of music and would stimulate a desire to emulate famous artistes. The piano would come into its own again if it were properly marketed.

He saw that the small houses which had been built in thousands for the newlyweds of the day would not accommodate an ordinary piano. The traditional piano did not fit into the home with the new low straight-line furniture. He conceived the idea of designing a piano in contemporary style, small enough not to dominate the little rooms, attractive and practical.

The idea was discussed in his own works. There was much shaking of heads by wiseacres, enthusiasm from

. . . and converted a tradition-steeped trade into a live industry with 'modernity' its outstanding quality, once again proving the inviolability of the rule: Supply what the customer wants—not what you think he ought to want

*From an Interview with
W. G. EAVESTAFF and SONS LTD.
Harringay, London*

others. Such an idea as making piano design follow furniture fashions had never occurred to piano makers.

Anyway, the first "Minipiano" was finished on a hot summer's afternoon in 1934, in the presence of the managing director of W. H. Barnes, Ltd., one of the biggest pianoforte retailers in the country. The next day that black and chromium "Minipiano" was in the just-opened Oxford Street showrooms of the Barnes Company. They had to get a policeman to keep clear a path on the pavement through the thronging crowds. On the same day that piano was sold.

'Trade' was Nervous, but Public was Enthusiastic

How did the "trade" react? Badly. The retailers did not like the idea at all, thought the new design was a "freak." For the first time in the history of Eavestaff (except for a brief competition in earlier days), the directors decided to advertise in the Press and used spaces in several daily papers and in magazines regularly.

As soon as the public was told about the "Minipiano" it went to retailers' showrooms to see it. The trade began to fall in line, and sales went steadily up. The public liked the modern line, the coloured cases, the tinted keys; they were new; they were modern and in keeping with the furnishing fashions of the time.

In the first year sales reached about 2,000, most of them to people who would not otherwise have bought a piano. Eavestaffs knew that from the fact that the sales of ordinary pianos were not reduced, in fact increased a little. Now about 200 pianos leave the factories of Eavestaff every week, and about half of them are "Minipianos."

Continuing the policy of keeping up

with the fashion and improving the product as much as possible, Eavestaffs have just introduced the "Mini-Royal"—a new model with the same length of string as a 5 ft. grand pianoforte. This has a greatly improved tone and bigger volume.

In order to stimulate sales as much as possible, the price has been kept down to 43 guineas on the assumption that mass production can be maintained. If the "Mini-Royal" were costed on the old basis of piano making it would be priced at at least 50 guineas.

It is not unlikely that the production of a normal-size grand piano performance within the compass and design of a "Minipiano" will have a far-reaching effect on the trade. It now becomes a serious instrument for the highbrow pianist who insists on fine volume and quality of tone. Not that the former higher grades of "Minipiano" were not to be taken seriously. They have been used by Charlie Kunz, Harry Roy, Jack Hylton, Jack Payne, Mantovani, and many other famous light musicians, and there is one in the Royal Palace for the use of the two young Princesses.

Since the introduction of the instrument, the advertising has followed the same theme until now, when a change has been made. The original method was to expatiate on the charms of design and tone, to represent it as the descendant of a long line of famous pianos made by the largest firm in Europe and to list the well-known people who had paid it tribute.

There's a Moral in This 'Success' Story

Nearly always a coupon has been used inviting a booklet. The inquiries have then been sent on to local dealers without direct acknowledgment from Eavestaffs.

The new theme is based on the headline, "Just as a matter of comparison." The copy draws a parallel between early motor-cars and their modern perfection and the old-style pianos and the modern "Minipiano."

Catalogues, folders and showcards are used for distribution at the point of sale.

And the moral of this success story is

that the product must be designed for the place where it is to be used, not in accordance with dying custom. It must fit the needs of the age into which it is born. Then, if necessary, the merchandising methods must be rejuvenated too, so that the product is efficiently presented to its prospective buyer.

There is no place for mildewed red tape in marketing to-day.

Those Postal Shots to Business Firms . . .



Do they Reach the Executives for Whom they Are Intended?

MARTIN H. PERRY, Director, The Wellington Press Postal Advertising Services Ltd., gives these answers from 646 representative firms.

MOST direct mail sales managers lose sleep thinking about this poser. To them, of course, the answer is a matter almost of life and death.

But the answer is very important, too, to all sales or advertising managers who use the post for any phase of their propaganda.

It was to try to get at least some indication of the proper answer that we sent out a questionnaire to 2,800 firms in all kinds of business and in every part of the country, asking them to tell us how their mail was received and dealt with.

The whole 2,800 did not reply. We did not expect it. But 646 firms very helpfully did, a response of 23 per cent. Direct mail men will be able to appraise that result.

To get an inside slant on this important matter here, therefore, are the questions we asked:

Question

1 Who opens incoming mail at your office when it is addressed to the company and not to an individual?

Reply	Percentage
A senior executive	48.5
A junior executive	15.66
A post clerk	35.84

2 When it is addressed to an executive by name or title, who opens it?

The executive addressed	75.04
His secretary or assistant	20.52
A post clerk	4.44

3 When advertising matter is addressed only to the Co. is it distributed to the executive mostly likely to be interested?

Yes	96.5
No	3.5

[An enlightening result. Waste-paper basket pessimists please note.]

4 Has any junior the authority to destroy postal advertising matter before it is seen by an executive?

Yes	3.65
No	96.35

[A striking result. 96 per cent of juniors and post clerks have NO authority to destroy circulars. Additional remarks given to this question can all be summarized as "certainly not."]

5 Are franked or unsealed envelopes sorted separately or opened any differently from those sealed or bearing a 1½d. stamp?

Yes	11.6
No	88.4

[This explodes a popular fallacy.]

6 If "Yes," how are they handled differently?

Answers to this question are two-fold. 11.6% of unsealed matter is sorted separately either because it is regarded as of secondary importance, or because of envelope opening machines and other purely mechanical reasons.

7 Tick the day, or days of the week on which you receive least correspondence.

Mon.	47.95	Thur.	8.8
Tues.	9.26	Fri.	6.98
Wed.	5.61	Sat.	21.4

[This question was prompted to see whether there is a greater influx of mail on certain days, and it is obvious from the analysis that Monday and Saturday are the two days when least post is received. The advantages are somewhat offset by the "Monday morning feeling" in the one case and by the fact that many executives are away from the office on Saturday morning.]

8 Do you ever cast a letter unopened into the waste-paper basket if you do not know the sender or contents? Read the next question before answering.

Yes	3.82
No	96.18

[This result should be printed on silk in letters of gold and delivered by registered post to all lecturers on advertising and to all trade magazines, newspapers and advertising "experts"!]

9 If the type of envelope or a printed name on the envelope tells you that it is advertising matter from a company which does not interest you, do you then throw it away unopened?

Yes	16.39
No	83.61

[The object of this question was to determine whether a printed envelope lowered "attention value." Replies show that it does somewhat.]

10 If a postal advertising shop does interest you, do you like to find a business reply card or envelope enclosed ready for your use?

Yes	83.17
No	9.21
Immaterial	7.62

11 Do you save direct mail matter which is of interest?

Yes	95.88
No	4.12

[Read the last four words of the question and then the high percentage of "yes" replies will show how vital it is to ensure that your direct mail advertising is of INTEREST.]

Final Question No. 12 could not be accommodated here without awkwardly splitting it. It is therefore placed overleaf.—ED.

(Continued from previous page)

12 Do you object to an advertiser mailing you on a personal matter (like clothes or insurance) at your office address?

Yes
No

[This question will be of interest to many advertisers. We expected an even larger proportion of "nos," but the proportion is sufficiently large to merit careful thought.]

67-33
32-67

This Mounting Makes Photographs, Plans, Indestructible

SALES managers are realizing more and more the greater effectiveness of real photographs for various kinds of sales promotion matter. Particularly are photographs valuable for such purposes as salesmen's portfolios, showroom specimens, guard books for reference, filing for permanent records, and so on. But for all these purposes the life of the prints and their continued good condition are matters of great importance from the points of view of appearance, increased ease of handling and economy.

There is now available a special photo-mounting cloth which introduces all three of these advantages.

You simply take a sheet of this Holliston photo-cloth; dip it in water, lay it on the back of the photograph, squeegee off the surplus moisture, and you have a photo print that will stand all the bending, shuffling, thumbing it is ever likely to get.

Any photographs can of course be strengthened like this by anybody, but if your photographer or studio uses the Holliston cloth when they are making the prints the material can be put on the

prints while they are still wet from washing and can be squeegeed with the same operation that glazes the prints.

Holliston cloth, adhesive both sides, can be used for mounting photos back to back—as would be needed for a record

album or salesman's portfolio. In these cases the cloth sheets can be supplied with a small "hinged" extension for punching or otherwise clipping into a loose-leaf binder. In fact the actual binders can also be supplied at an unusually low price.

Photographs, of course, are not the only things that can be preserved in this way. Plans, photostats, blue-prints or documents of any kind can similarly be made indestructible against ordinary wear and tear.

Where plans and documents of large size are mounted in this way not only is their texture strengthened and protected, but their handling in the ordinary course of work, and their subsequent filing, are thus made far easier.

From Sargents Embrook, Ltd., 105 London Street, Reading, inquirers can get a sample "Hollistoned" photo.

"No Sales Talk" Strengthens this Sales Promotion Portfolio

A NEW and effective idea in sales promotion folders has just been got out by Burroughs Adding Machine, Ltd. In the form of a portfolio containing twenty 8 by 11 in. loose "photographs" is pictured the wide range of Burroughs accounting machines as installed in the branches of one of their clients—The Imperial Tobacco Co., Ltd., of Bristol.

It is understood that Burroughs considered this idea of illustrating the

equipment actually at work in a user's offices more convincing, as well as more novel, than merely displaying the various units in catalogue fashion. Especially will it be helpful, they believe, for the use of salesmen when talking to their prospects—as it enables the business executive to appreciate at a glance that the Burroughs organization is equipped to assist in the mechanization of any number of branches, no matter where they are located.

A dignified feature of the portfolio is the absence of "sales talk." The inside cover simply carries an appreciative letter from the chief accountant of the I.T.C. The opposite cover provides the pocket carrying the photographs.

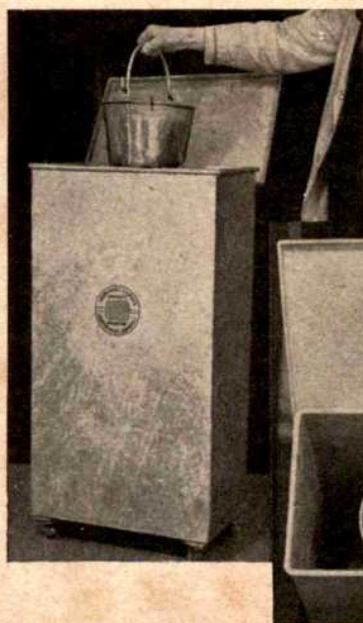
These "photos" are worth a note because, despite their realistic appearance, they are not actually prints from negatives.

Try This When You Can't Use Photographs

Burroughs have never been known to skimp any job they undertake; but when they estimated the weight and bulk of actual photographic prints of the size and quantity necessary, they realized that this method was not practicable. A rather clever alternative was therefore adopted. The illustrations were printed (photogravure) on a specially heavy art stock, and varnished.

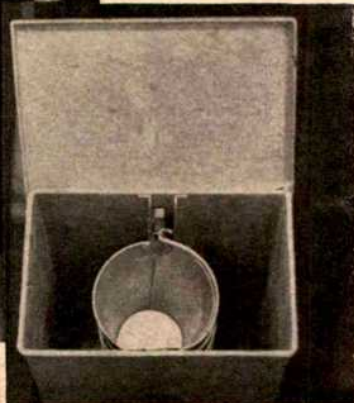
The result is that in appearance and "handling" the pictures are almost indistinguishable from actual photos. The outside covers of this portfolio consist entirely of a display, in true-to-life colour, of forty of I.T.C.'s leading brands of tobacco and cigarettes. This idea of using varnished photogravure illustrations is worth remembering when, on the score of quantity, actual photos are uneconomic.

Fire Tank for A.R.P. or General Use



Contrast the old-time row of open fire buckets, unauthorized receptacles for cigarette-ends, etc., with this neat "Bristol" Nested Fire Bucket Tank. Here, compactly stowed, are no less than ten 2-gallon buckets. They rest in the 34 gallons of water which the galvanized tank holds, thus each bucket, as it is lifted, comes out full of clean water. With lid closed the tank is as neat in appearance as a filing cabinet and, with contents protected and out of

sight, can thus be kept prominently handy in even the best furnished offices. Ball bearing castors make it mobile. Fitted with a stirrup pump it can, for local fires, incendiary bombs, etc., replace a hose should the pipe line or water main be damaged by air raid. Further details from Engineering Stores & Services Ltd., Ashton Gate, Bristol 3. This tank has been approved by Fire Prevention Officers, by Local Authorities and Borough Engineers



Here is The LAW

About the Hire Purchase Moratorium

By the **LEGAL ADVISER**

of "The Trader Publishing Co., Ltd." by whose
courtesy we reproduce this important article

IN considering the effect of the Order in Council imposing a moratorium for militiamen upon the hire-purchase trade, the first point that puzzles the lawyer is whether the Order, upon its strict language, has any effect upon hire-purchase transactions, as such, at all, other than the holding up of claims for money payments in common with claims of all other creditors for cash. Hire-purchase is nowhere specifically mentioned in the Order itself.

The Rights of 'Owners'

However, reference to the explanatory Memorandum which accompanies the Order makes it clear that it is intended to apply as holding up the various rights of owners under hire-purchase agreements. Nothing can be clearer than:

"It protects the militiaman from seizure of any property (e.g., goods obtained upon hire-purchase) in the exercise of any right arising by reason of his failure to fulfil an obligation entered into before June 15."

The protection of Article 1 of the new Order covers cases in which the debtor is a person who is or has been a person under training, and in which:

- (a) Judgment has been given for payment of money;
- (b) Judgment has been given for enforcement of any security;
- (c) Any person holds right of enforcement of any security without going to Court.

In the first two cases, (a) and (b), it is simply provided that the judgment shall not be enforced without the special leave of the Court, whilst in the third case, (c), the freedom of action of the party legally entitled to seize is sterilized, and he is prohibited from putting his rights into force without the leave of the Court.

This protection is to continue, so far as the militiaman is concerned, during his six months' (or longer) training and for six months after, whilst, by a subsequent Article (2), certain relief given to third parties affected may extend to any time without limit, and it is arguable that this extension applies also to the militiaman himself.

The explanatory Memorandum draws attention to the relief given to guarantors; although, again, guarantors are not named in the Order itself. In cases within the Hire-Purchase Act, 1938, of course, the matter works out to this effect by reason of it being compulsory

to make a guarantor party to the action if a summons is issued against the hirer, and vice versa, so that if proceedings are held up against the hirer they seem automatically held up against the guarantor.

This gentleman, however, comes into the picture, under Article 2, as being a third party affected by the transaction, and whether his connection is that of guarantor or not does not matter, as the terms of the article in favour of third parties connected with transactions with militiamen are very wide and extend far beyond the protection of the militiaman during his period of training or six months afterwards, for by this second article power is given to the Court to stay proceedings brought against any person whatsoever (even if quite unconnected with any militiaman's contract), or order very small instalments, where hardship exists by reason of any other person "having been" (in the past, without limit of time) in training; and, where freedom to exercise right without Court order exists, to restrain such exercise of rights by injunction.

Scope of The Moratorium

Few people will dispute that the case of the guarantor given in the explanatory Memorandum as illustration must be within the scope of the article; but a little consideration of its language will bring to mind many other people, who might not at first be visualized as within any military training moratorium. For example, the father of a family, who is himself the hirer, who alleges diminution in the household income owing to his son going into training. And what of the small employer hirer, who says he is hard hit by losing his profitable assistant?

In the group of cases in Article 1, in which leave of the Court is necessary before proceedings, there exists both in proceedings against the hirer and against guarantor the initial test that the proceedings arise by reason of some default of the militiaman; but there is no such test or foundation-point in reference to the wide powers of the Court as to third parties under Article 2, which may be exercised in cases where the militiaman was no more connected with the contract than the proverbial man-in-the-moon, if it can be shown that the party before the Court is under hardship (or will be under hardship) by reason of somebody else (not necessarily a relation) going into training. There is at

present no provision for previous notice to a plaintiff of any defensive tactics of this nature.

The general and popular idea conveyed by announcement of a moratorium for militiamen, of mere general suspension of all legal proceedings against them while under training or service, therefore, hardly accords with the effect of what is before us.

It is to be now observed that, even in the case of a militiaman, power is reserved to a judge to authorize execution, even whilst training or service is in progress (though this must obviously be viewed as not permitting a committal order). The effective form taken by Article 1 of the Order is simply to restrain proceedings without the leave of the Court, but placing no limit on the Court's discretion in granting or withholding leave.

Some doubt may reasonably be raised as to whether the provision for the relief of third parties (under Article 2) enabling such to apply to the Court upon ground of hardship arising from the past service of a militiaman (or plead such facts where a case is brought against him) does not include the soldier himself. The words are not clear, but I am of opinion, after careful consideration, that they *will* be held to include him as being an example of "any person." If so, the holding up of rights against the militiaman hirer are by no means effectively confined to the training period plus six months.

The only difference is that during training, and for six months afterwards, no execution or seizure must take place without the leave of the Court; after that period the defendant can apply to the judge to "hold up" things with the same judicial powers as he possessed during the year that the Court was constituted a sort of essential "buffer" to be dealt with by the other side before anything could be done at all.

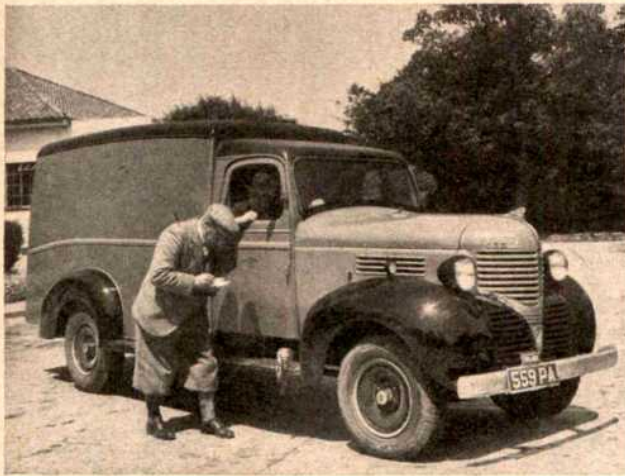
Court Procedure Uncertain

A crumb of satisfaction can, perhaps, be picked up from the very wide words of Article 2 as applicable to the hire-purchase trader in his difficulties with his own creditors, caused by the operation of the Order. It can scarcely be denied that a trader who is put into a difficult position with his factors, or manufacturers, or finance house, owing to a big group of his customers becoming militiamen, is a person whose circumstances are "indirectly attributable to persons being or having been under training."

Whatever else may be ventured upon the subject, it is quite certain that a new and very extensive group (probably

(Continued on page 31)

High Speed Van for Express Deliveries



The New DODGE 25 cwt

Under Road Test by

RICHARD TWELVETREES, A.M.I.Mech.E.

Taking the Tapley readings during the test run. Note the smart lines of this Van

TO meet the demands of business users needing fast vans for express delivery work, Dodge Brothers (Britain), Ltd., have recently added a very attractive 25 cwt. model to their wide range of commercial vehicles.

Retaining all the main characteristics of the earlier Dodge R.D.21 type, the new vehicle, known as the T.D.21, incorporates many improvements resulting from another year's research work to ensure still greater dependability, with enhanced performance and wide utility for many trade transport services.

This Van Now Takes 4 cwt. More Pay-Load

One outstanding feature is that although the unladen weight has been increased by only 50 lb. an addition of no less than 4 cwt. to the maximum pay-load has been achieved. In delivery van form, the new vehicle has a capacity of 216 cu. ft., the standard dimensions of the body being 9 ft. 6 in. long by 4 ft. 10½ in. wide by 4 ft. 8 in. high.

The model submitted by the manufacturers for the BUSINESS special road test was a standard van, loaded with concrete blocks which, with the weight of the driver and two observers, brought the total weight up to 3 tons 8 cwt.

Apparatus used for recording test results were a Zenith petrol consumption meter, Tapley performance and brake meters and a stop-watch as an additional check on acceleration and braking figures.

As in the case of every new production submitted to what may be described as its first "type test," the Dodge 25-cwt. van underwent treatment of a very searching character from which, as will be gathered from the following test report, it emerged with very high credit.

On its arrival at the starting point of the North Downs circuit, details of the vehicle were examined critically both from the viewpoint of mechanical

features and operating utility, all of which proved satisfactory.

Before any attempt was made to record details of performance, I drove the Dodge van hard for ten miles over a difficult country course, up hill and down dale, and along roads presenting varied surface conditions.

Equipped with a six-cylinder "L" head engine (3½ in. bore by 4½ in. stroke) rated at 25.35 h.p. R.A.C. and developing 77 b.h.p. at 3,000 r.p.m., the Dodge van is certainly one of the liveliest vehicles of its type I have yet tested. The slightest touch on the accelerator pedal produces instant response from the engine which, augmented by carefully graded gear ratios in the three speed gear box, gives very quick acceleration.

The ease of gear changing is particularly noticeable, the movement of the selector mechanism being rendered still more light and positive by the smooth action of the 10 in. single plate clutch which has a self-lubricating withdrawal race and a shock absorbing centre.

Although in accordance with test practice, the van had to be driven relentlessly over the roughest sections of the course, I was not forgetful of the operator's need for carrying fragile

goods without risk of damage and, in this connection, it was gratifying to observe how well the suspension system absorbed all irregularities of the road surface.

Worm and sector steering with finger-light action relieves directional control of all physical effort on the part of the driver. I found the automatic castoring effect very good, and when the steering wheel was released altogether the van followed a perfectly true course on a straight road, without any tendency to wander.

The foot brake, operating through hydraulic mechanism on the four wheels, creates the greatest confidence irrespective of travel conditions. Intended for parking purposes only, the hand brake acts on the transmission and will hold the van on any gradient where the necessary wheel adhesion exists.

My first tests of hill-climbing took place on the long ascent at White Hill, Caterham, where the maximum gradient is 1 in 4½. Bottom gear was needed at the steepest point, but the powerful six-cylinder engine made light work of the climb without need of full throttle, thus leaving a useful reserve of power available for further acceleration or any possible emergency.

The Test Hill's Gradient Was 1 in 3½

Next, with the object of placing a definite value upon Dodge performance on hills, I drove over the hills towards Upper Caterham and made for a private road where a good concrete surface with a gradient of 1 in 3½ offers exceptionally favourable conditions for checking results with the aid of the Tapley meters.

Approaching the incline in top gear, a maximum pull of 120 lb. per ton was recorded just before changing down into second. On the latter, or intermediate ratio, the meter gave a reading of 280 lb. per ton and, just where the gradient is steepest the pull of 380 lb. per ton was recorded which, however, does not represent the maximum pull of the engine on that ratio, because a gradient of 1 in 3½ will not bring the engine down to the point of 'stalling,' i.e., when the maximum pull occurs.

This test hill proved the power of the Dodge engine and performance of the van beyond dispute, for gradients like

FACTS AT A GLANCE

Vehicle Tested: Dodge 25-cwt. Delivery Van.

Makers: Dodge Brothers (Britain) Ltd., Kew, Surrey.

Capacity: 25-cwt.

Body Length: 9 ft. 6 in.

Wheelbase: 11 ft. 1 in.

Fuel Consumption: 19.5 m.p.g.

Maximum Gradient Climbed: 1 in 3½.

Annual Tax: £20.

Vehicle Price: £300.



Topping the 1 in 3½ test hill. Bottom gear, naturally, was called for by the Dodge, with full load, did not have to be pushed "all out" to maintain a good turn of speed on the gradient

this are seldom encountered under actual service conditions.

In addition to imposing severe tests upon the whole vehicle, the first stage of the trial proved that the manufacturers have not resorted to the use of a lean mixture which, while good for economy, might be detrimental to performance.

The next thing I was anxious to discover was fuel consumption, so on regaining the main Eastbourne road a halt was called to set the Zenith petrol meter in action, after which the journey was continued at a steady 30 m.p.h.

towards East Grinstead. Three separate checks were taken under approximately similar conditions, the average run worked out at 19.5 m.p.g., a result that should satisfy any user of fast delivery vans of high performance.

Express delivery work, in addition to exacting great demands upon van durability and reliable performance, calls for specially good acceleration which, for the operator's convenience is best expressed by the time-speed factor.

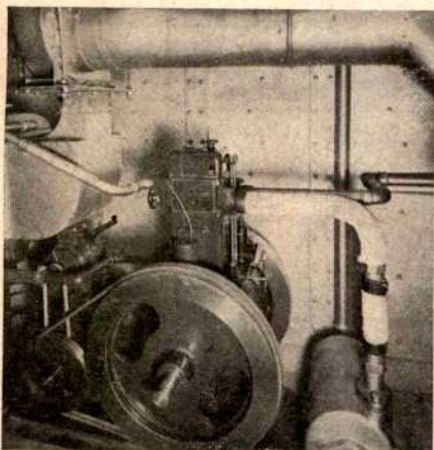
Three separate acceleration tests next made, the road chosen for the purpose having a level concrete surface affording

excellent adhesion for the wheels. In the first instance, the van was started with bottom gear engaged, second and top ratios being introduced at the appropriate engine and road speeds. Thirty m.p.h. was reached in 25 2/5th seconds, proving amongst other things that the gears can be manipulated very quickly and the flexibility of the power unit in response to throttle movement.

Then, while running at 10 m.p.h. on direct drive, with the engine pulling at its lowest speed, the accelerator was depressed fully: in 13 seconds the van was moving easily at 30 m.p.h.

In addition to its capacity for ultra-rapid acceleration, this new Dodge 25-cwt. model possesses a fine turn of speed and will, in fact, travel quite steadily at a mile-a-minute under full load, taking all ordinary main road gradients in its stride.

This capacity for quick travel places great responsibility upon the braking system, and in order to satisfy myself as to the non-existence of brake "fade" I kept the brake pedal depressed lightly when descending Tilburstow Hill to warm the drums thoroughly. Then, with everything against maximum retardation, the brake was operated fully at 30 m.p.h., which brought the van to rest smoothly and progressively in 2.4 seconds. The braking efficiency shown by the decelerometer was 58 per cent, equivalent stopping distance being 52 feet.



A.R.P. Stand-By Plants for Dug-outs and Factories

IN any A.R.P. scheme the following factors are of the utmost importance: (1) Provision of stand-by electric light and power supply; (2) Provision of adequate water-pumping plant; (3) Availability of decontaminating plant.

However good your shelter-trench system, if it is plunged in darkness due to bombs shattering the mains electric supply system, panic among the personnel becomes an imminent danger. And it is well to remember that oil lamps or other emergency illuminants

that consume oxygen are ruled out.

In the event of bombs destroying water mains, trenches, dugouts and factory run the danger of flooding. Or, quite possibly, in the ordinary way, rain and seepage water may be a constant nuisance, even in the best-built underground shelters. Suitable pumping plant is the solution here.

For gas, decontamination plant is essential.

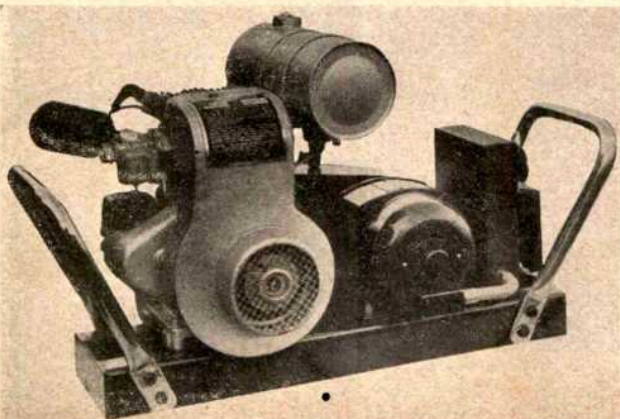
In a new booklet, "Stand-by Plant and Civil Defence," with a sub-title, "If Battersea Were Bombed," R. A. Lister & Co., Ltd., give some very useful information on the above three factors. Stand-by electric plant for dug-outs and for the factory itself is illustrated, and so is emergency plant for pumping and decontamination.

If you would like a free copy of this booklet, ask Lister's at Imperial House, Kingsway, London, W.C.2., or at Dursley, Gloucestershire.

Incidentally, Listers have a special A.R.P. advisory department, which you are invited to make use of.

If your problem cannot be submitted by correspondence or 'phone, Listers will send, free of cost to you, an A.R.P. engineer to give you his advice "on the site."

Above: A Lister 3.5 kva generator set installed in a splinter-proof room at the Distillers Co., Ltd., London



Left: This portable Lister generator has many advantages, especially for smaller business. It gives an output of 500 watts and can easily be carried by two men. The unit is provided complete with switch-board carrying main fuses and the usual dial indicators

Staff A.R.P. Shelters MUST be Lighted

This Is How We Have Arranged Our System

say E. K. COLE & CO., LTD., Southend-on-Sea



For emergency lighting this petrol-driven generator is installed. When fitted with a fan it also provides a degree of assisted ventilation through the shelters

IN an air raid nothing would be more likely to cause panic than sudden darkness in the dug-outs and trenches sheltering the staff of a large factory. It is absolutely essential, therefore, that the lighting system provided be as failure-proof as ingenuity can devise.

E. K. Cole, Ltd., of Southend-on-Sea, who have provided a very comprehensive A.R.P. system for their 3,000 employees, pass on the following details of the lighting system for the interest and information of other business concerns contemplating similar A.R.P. work.

In view of the possibility of a failure in the mains electricity supply during an air raid it is inadvisable to depend solely upon it for shelter illumination, and the alternatives of a stand-by generating plant, accumulators, battery, lamps, etc., must be considered.

Accumulators of the heavy-duty car type would probably be suitable for a small shelter, but in a large shelter the number required and the difficulties of charging, if the mains should fail for a long period, render them of doubtful suitability. There remain the alternatives of a generating plant and dry batteries. Both these have been adopted for the Ekco shelters.

The generating plant is a normal 4-cylinder water-cooled petrol engine direct-coupled to a dynamo capable of supplying 3 kilowatts at 110 volts D.C., and this is the main source of emergency lighting.

The system has been safeguarded in various ways against breakdown, but if complete failure should occur there are a number of individual dry battery torches hung at close intervals throughout the galleries.

These galleries, it should be explained, are laid out in a series of rectangles, the object being to minimize the effect of blast and to localize as far as possible the results of a direct hit. There are seven rectangles, as the trenches are constructed at present, and twenty-eight galleries, with at least two means of exit from any point.

Every rectangle is lit by 22 lamps. These are fed by two circuits, each wired separately right back to the power room and, of course, separately fused.

Each of these circuits is arranged to form a ring main round the square, and the lamps are connected to the two ring mains alternately.

In this way a clean break in each ring main will not result in a failure, and two or more breaks, or a "short" in one circuit with not more than one clean break in the other, will still leave alternate lamps in operation.

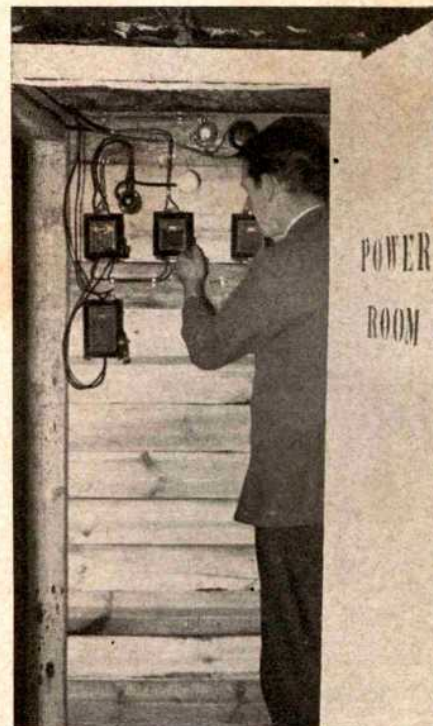
Electric Cables Have Been Specially Protected

A direct hit on the power plant would naturally necessitate resorting to the dry-battery torches, but the plant and main distributing cables have been covered with an additional nine inches of concrete and rubble to give them extra protection.

Each square of the shelter is wired for four additional lamps, one at each corner, independently of the ring mains, and these are connected to the 230-volt A.C. mains supply. This has been done chiefly so that practices may be carried out without the necessity of running the emergency generator.

As an additional safeguard, the switchgear is so arranged that groups of two 110-volt ring main circuits can be put in series and run off the 230-volt mains supply if desired. This device is obviously applicable only where the generator voltage bears suitable relation to the mains voltage.

Perhaps the best arrangement would be to have two ring mains round each square of shelter, each operating direct from the 230-volt mains, with a change-over to 230-volt generator, operated automatically on failure of the mains supply. Alternatively, if importance is attached to the possibility of live wire ends appearing after a bomb explosion, a transformer might be used for the mains and the whole system run at 110 volts and, by earthing the centre of the secondary winding, the maximum



The Shelters have three lighting systems: 1, The Corporation mains; 2, Emergency generator; 3, Individual battery wall torches. The wiring system is arranged to withstand four breaks before being put out of action

potential above earth at any point could be reduced to 55 volts.

A battery of accumulators placed remote from the generating plant and connected through separate wiring to the ring mains would be an additional safeguard, although their cost and maintenance is a drawback in peace-time.

When considering the best method of wiring it was decided not to use conduit below ground on account of internal condensation and rusting, and because an explosion might result in the conduit system becoming "live." Tough rubber-covered cable has been used throughout.

Single conductors fixed in ceramic cleats are preferred as a wiring system, as being unlikely to develop short circuits even if broken; moulded lamp-holders and junction boxes are obviously preferable to any other type for reasons of safety and resistance to damp; and lamp-holders of the type which clamp on to rubber cables forming a water-

tight connection are considered most suitable.

Switches, apart from main circuit switches, are considered not only unnecessary but undesirable unless of the key-operated type and placed out of normal reach.

Further obvious precautions are the dipping of junctions in the rubber cable in black waterproof compound and the protection of metal switch contacts and lamp-holders with vaseline.

It is advisable for the wiring, lamps and connections to be inspected and tested at intervals, and for the emergency generator to be maintained in working order by running for a short time each week. In peace-time it may be found desirable to make provision for the removal of the generator for service or for casual use, and this can be done by leaving a large manhole opening, subsequently to be sandbagged and concreted.

Torch batteries will require renewal from time to time, irrespective of

whether they are used, and they are preferably stored until required in dry boxes rather than actually placed inside the torches, as they tend to corrode the cases if allowed to become damp.

If shelter heating is considered desirable in first-aid bays, robust, steel-cased convectors are recommended in view of their high safety factor and absence of effect upon the air. Electric water-heaters are also useful for first-aid requirements and, if not permanently installed, might be noted on the stock-list for attention in the event of emergencies.

One final point—if provision is made for the shelters to be illuminated, *provision must be made for obscuring the light from above-ground.*

Twin layers of heavy blanket material at each entrance and exit can be made to serve the double purpose of Light locks and Gas locks, but they should be arranged so as not to interfere in any way with the rapid occupation of the shelters.

Light-Obscuration Expenses Can be Cut by 75%

A SIMPLE device that will cut, by *seventy-five per cent*, the high cost of light-obscuration for offices and factories is one of the most useful A.R.P. developments of the moment.

Under the Civil Defence Bill business men must prepare now to obscure every window and skylight so that, when artificial light is on, rays shall not be visible from outside. Even essential traffic lights must not be visible at a greater distance than 250 feet horizontally—and from above, not at all. But, and this is most important, as the proposed law now stands, this light obscuration in buildings must be done by masking windows and skylights with properly fitting opaque blinds or by some opaque material that serves the same purpose.

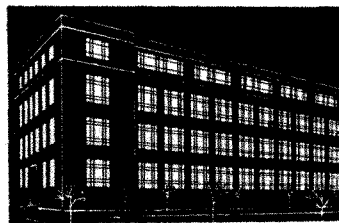
At Present, These Huge Costs are Imminent

That may sound simple. But look at these costs:

The managing director of a well-known radio manufacturing firm told us that to "mask" his three factories in this way will cost more than £7,500. That figure is an actual quotation, and is based on permanent fittings in keeping with the factories' type of construction.

The head of another London firm, owning a five-floor modern office building, has also got his quotation: £800 a floor!

The "small" manufacturer, too, is going to catch it. A little furniture factory in the East End—modern, with ample roof lights—will have to pay nearly £1,000, for even the cheapest material.



With these heavy costs in mind, therefore, it was with great interest that we watched a demonstration of this new device that meets official requirements, at a fraction of the cost.

In essence, the device is a cylindrical light shade, one side opaque, the other a translucent indigo.

By this constituting a control of the actual light sources while leaving windows unobscured the principle is in direct contrast to the less logical official injunction to leave light sources un-screened while blanketing the windows.

To affix this device, one on each electric light bulb when the warning sounds, it is necessary only to push it up over the bulbs, where it automatically clips into place. No fitting, screwing or fiddling about of any kind is needed, only care to see that opaque sides of the shades are towards windows.

The effect of these shades is to suffuse the room with a deep indigo glow. This in itself is quite sufficient for essential visibility, but the shades permit, at the same time, unobscured light to play downwards on limited areas beneath each light source, so that normal work can be carried on without interruption.

In most cases this degree of obscuration is sufficient, as from 250 feet distance outside, the illuminated interior is invisible through the clear glass windows.

If, however, the work surfaces on which the unobscured light falls are white, or very light coloured, and therefore liable to produce a high degree of reflected light, then a supplementary translucent panel can be slid across the open base of each shade. Immediately, reflected white light is cut off, people inside the room still have good visibility, but to the observer even less than 100 feet away outside, the illuminated interior presents the appearance of a complete black-out, thus coming well within official regulation.

Several A.R.P. wardens and chief constables who saw the demonstration can confirm this.

In addition to the 75 per cent saving in initial costs there are further advantages to this particular system of lamp-shading.

Panic-Creating Total Darkness Is Completely Avoided

For example, if, when artificial light is on, a raid-warning sounds, there is no need first to switch out all lights and to plunge the factory or office in darkness, as would be necessary while windows are being masked by blinds or blankets. Each employee could be responsible for the lights in his immediate neighbourhood and could slip the shades on instantly.

Thus any period of total darkness is avoided. This is a most important factor as darkness is the prime producer of panic, and is the one thing to be guarded against.

Again, obscuration of the light sources absolutely prevents accidental violation of the law which is a possible risk through a window blind being ill-

(Continued on page 32)

Now is the time

By T. W. T. MERCER

To FIND AND MEND THE WEAK SPOTS IN Your Office Control and Equipment

Check-up On Those Collections

UNDER present business conditions most firms, especially small firms, need all the liquid capital they can get. In businesses where August is a slack month, the lull can be utilized for checking up the credit collection department.

The exact day-by-day situation of money outstanding is one of the most important pieces of advice for the management to have. There is nothing like a colour-signalled visible index system for providing this data. Many firms can confirm that collections and bad debts have been much reduced by employing this method of control.

"Visibles" are not expensive, are easy to install, and can be used with equal effect in the very small, as in the large business.

Look into your collection letters: are they effective, do they want re-styling, can the plan of their dispatch be improved?

Have you got the right man on this job of looking after collections? If it is the job of the secretary or chief accountant, is either of these executives too busy to give the work his best consideration when business is in full swing? Should he have some help?

How is your tie-up between the sales department and credit-sanctioning? Is it a mistake-proof arrangement that absolutely prevents the too great outflow of money that is subsequently difficult to get in? In small firms where no properly organized credit sanction department is possible there often exists a weakness here that is well worth tightening up.

If you do a hire-purchase business, don't fail to read the article on page 19.

Reduce Cost & Chaos Of Outward Mail

UNORGANIZED methods in the outgoing mail department cause more needless overtime and hectic peak

periods than is generally imagined. The slack time of August is a good opportunity for checking up here.

In the first place have any of your executives the very widespread, but nevertheless very bad, habit of either not dictating letters until late in the day, or of neglecting to sign them until about 5.30, or later?

Letters cannot be typed if they are not dictated, they cannot be signed till they are typed, and the mail clerks cannot do their part until both these things have been attended to. That sounds obvious, but it is often not observed.

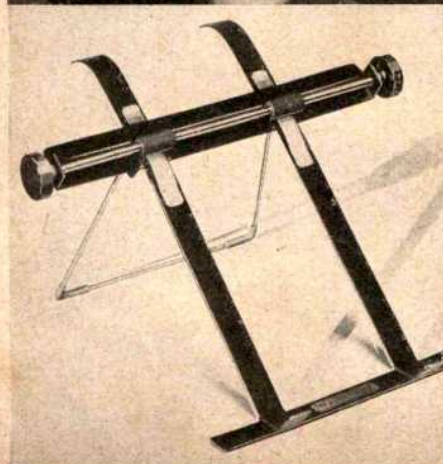
Start checking, then, at the executive end. Insist that the in-coming morning mail is dictated and, *wherever possible*, signed and handed to the mail department before lunch. By getting a big batch of stuff away to the post office early in the day the mail clerk can enormously relieve the evening pressure.

Make some ruling about the time limit for the mail department's acceptance of letters at the end of the day.

If you use manual stamping methods, go into the question of (a) stamp affixing machines; (b) postal franking machines. One of these machines may enable you to release employees from this department as well as to save time.

If you periodically have mass mailings, such as postal publicity shots, etc., letter sealing machines may also be well worth your attention. There are both hand and power operated units.

Through the installation of one franking machine and one sealing machine a busy company that I know was able to reduce the personnel in its mail dispatch department from five full-time girls to one and a part-time junior. And into the bargain, acute peak periods when mass mailings went out were—not entirely obviated, that must be admitted—but very considerably reduced both in intensity and duration of time.



FOR QUICKER TRANSCRIPTIONS

This handy copyholder has the platen action of a typewriter so that the copy can be held permanently rigid or wound up, as required, to enable the sight guide to follow the line being copied. This very inexpensive gadget comes from Wrightway Products, 31 Bushey Road, Shirley, Surrey, who also market a larger holder for balance sheets, statistical sheets, etc., and a third model designed as a rest for ordinary shorthand notebooks, taking stiff or limp covered books

Walking-time Is a Dead Loss

YOU MAY not have thought anything about a "flow-line" for your office work. To factory managers, of course, the flow-line is one of the most important things in his life if output is to be maintained and costs kept down.

In the office there are not the same possibilities for flow study; nevertheless, quite a lot can be done through this means to make office work run more smoothly and to involve less wasted, and therefore unprofitable, time.

For example, first of all spend some

On Active Service for 35 years!



SUPPLIED 1902—STILL GIVING COMPLETE SATISFACTION

Messrs. Joseph Lyons & Co.,
Ltd., write:—

"We are glad to say—
that the *ledgers installed
as long ago as 1902* are
still giving us complete
satisfaction."

The italics are ours. The claim is
NOT ours. It is made by a firm who,
following their original purchase,
have bought over 700 of our Binders.

How long have you had your
Binders?

Are they giving complete
satisfaction?

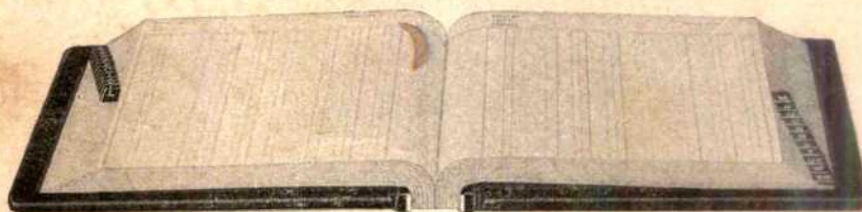
Will they continue to do so after
35 years?

CCOPE-CHAT LOOSE LEAF BINDERS and Requisites are made in every type—Thong, Post, Section Post, Spring, etc., for pen or machine posting, and are made in a size which will suit your forms. Nothing but *proved* materials and highly skilled craftsmanship could produce these attractive Binders, which are finished in many coverings and edged with "Hardite"—an almost indestructible material of pleasing touch and shade. We *could* win your confidence by illustrating tests—such as that of a Gloucester County Council steam roller rolling and re-rolling over a binder taken from stock—but you do not buy a binder to be run over. You buy it to give lasting service under your own working conditions. The best test you can give a Cope-Chat Binder is to use one.

COPE-CHAT Quality costs no more.

WHY NOT SEND US YOUR ENQUIRIES NOW?

Note the flat opening.
No binder of any make
will give you better
writing facilities. It is
a pleasure to use.



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BRANCHES THROUGHOUT THE PROVINCES

time watching your office personnel. Notice if people have to get up constantly to fetch work, to take it to someone else, to refer to files, indexes, and so on. This walking to and fro will tell you a great deal about the "flow" of the work. It will tell you not only if the direction of the work through the office is wrong, but also if the various units of equipment are badly placed in relation to the employees who use them.

Golden rule is: reduce "walking" to the absolute minimum. When, by making all the necessary adjustments you have done that, you can take it as a fact that your office is much better organized and that more of the time you pay for is being devoted to actual work.

Light, Heat, Ventilation Influence Profits

WHILE YOU are about it, check up on the artificial lighting. In a month or two the dark season starts and the standard of your lighting will considerably influence the output of work.

Lighting is a scientific subject; it is a job for experts, but reputable lighting experts will give you advice, free. Now, then, is the time to call them in. They may be able to improve your lighting to such an extent that the increased output and reduced "overhead" which results will, within the first year, more than pay for any alterations made. And, of course, the improvement introduced represents extra profit each year thereafter.

With lighting should be considered heating and ventilating. Here again the experts ought to be consulted. Their advice, too, is free.

The improvements to work, and the cash savings that are possible when properly planned heating and ventilation are installed have been established beyond dispute. But apart from that, the recent Factories Act has made it necessary for the business man to look closer into these things. August is about the best month for this purpose.

Use Complaints to Track Down Weak Spots

THERE ARE many other spots in the office that would repay you for a check-up. A good way to discover these is to review in your mind any complaints received during the past year. I mean internal complaints involving staff as well as grumbles from customers outside.

For instance, maybe some time ago a highly important letter or document was lost. Recollection of such an incident should prompt a survey of the filing system. Is somebody definitely responsible for the custody of files, or do they offer free access to all and sundry who care to dip into them? Under this latter arrangement lost, stolen or strayed documents are not to be wondered at.

Any complaint about your telephone service ought to set you probing this important matter. Have you got the right type of operator on the switchboard? Are her meal-time and holiday reliefs also of the right type, and capable?

Do you use your G.P.O. phone as an internal "house" phone and so frequently cause in-coming calls from

customers and other inquirers to be blocked?

This is a bad arrangement, it jeopardizes business by exasperating callers from outside. Separate internal telephones, "straight," automatic or loud-speaker, can be had on a very moderate rental basis. There is no need to congest the G.P.O. phone with "house" traffic.

Time to Do It is NOW

MANY more spots could be cited as worthy of investigation, but having thus been given the idea the business executive can, working on this basis, well discover in his own organization all those weak spots which will benefit from remedied action.

The point is, do it now, this month, if, as I say, August is, for your business, the slack month of the year. When September approaches and the Autumn—winter busy-ness starts there is no time in which to patch up lame spots. You need to be all primed with a well overhauled organization of first-class equipment and method. So do that "vetting" NOW.

The Problem of Sick Leave for Office Workers

By C. T. HESSE

IN the factory, rules and regulations about sick pay are generally more clearly established and understood by employees than they are in the office. Office workers are not subject to the rigidity that governs the works.

Most employers appreciate the need for maintaining salaries, to some extent

at any rate, to absentees through sickness.

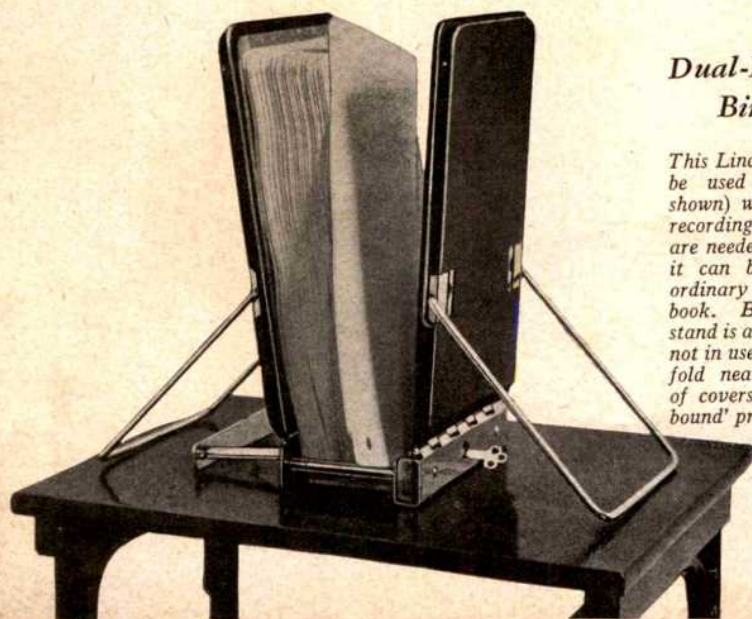
In the first place there is the justice of the thing, a purely humanitarian concept that no honest employer will ignore. Secondly there is the business angle which says "here is a proved employee, trained in our methods and ways, up to a point it is cheaper and better to keep him on the pay-roll than to find and train a stranger."

The question is, of course: What is that point?

No hard and fast rule can be laid down as general practice. Office managers must be guided by individual circumstances to decide for themselves. It will be worth while, however, to see what some firms are doing in this direction.

In one concern salaries are invariably maintained in full for the first week of absence, though it is obligatory to send in a doctor's certificate in the meantime. For every year's service the employee is entitled to an additional week with pay, up to a total of four weeks. If, then, the illness lasts beyond four consecutive weeks the salary is reduced by half for a further four weeks. If the illness lasts still longer the case is gone into individually and a decision is made according to the case.

Another firm allots a definite number of days in any one year in which em-



Dual-Purpose Binder

This Lincoln Binder can be used unlocked (as shown) with mechanical recording, no other trays are needed. Or, locked, it can be used as an ordinary hand-entry book. Built-in metal stand is a feature. When not in use metal supports fold neatly over edges of covers, giving 'steel-bound' protection. From C. Cakebread Ltd., 15-23 Baches St., London, N.1

PRIMUS GIVES YOU 22 CARAT-TIME



The correct stationery for all such typewritten record-work of which a number of carbon copies must be kept is

PRIMUS CONTINUOUS STATIONERY

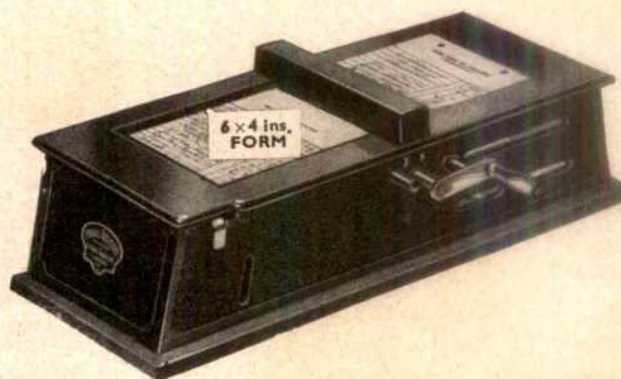
in conjunction with the continuous form attachment which fits any typewriter. Its use ensures the elimination of all non-productive operations such as insertion and removal of forms, inter-leaving carbons. By cutting out these irritating and fatiguing tasks, it preserves energy and concentrative powers, and also ensures 100% accuracy. You will find it justifies our claim to give you "22-carat" operator-time.

The value of time to you is governed by output in a given period.

You cannot get full value from your employees if part of their time is taken up in non-productive labours, however hard-working they may be.

Your stenographer, for example, may be conscientious and hard-working plus—and yet at least 30% of her working time may be dead loss to you.

Unless she uses the correct stationery, she is bound to waste that much time and energy on all repetitive record-work such as invoicing, works records, inter-department notes and records, etc.



FOR HANDWRITTEN RECORDS the PRIMUS Autographic Register for use with Continuous Stationery ensures the same speedy, smooth operation, while a copy automatically locked in the machine provides your auditor with a check on each transaction.

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employees are eligible for sickness-absence without any alteration in pay. These range from seven to fourteen days according to length of service.

This plan has been criticized as liable to create the impression among the employees that they are therefore entitled to take that number of days off anyway.

Well, in most concerns there are usually one or two people who will always take an advantage where they can get one. It is up to the manage-

ment, of course, to keep its eyes open and wits alive to check malingering.

In another firm office workers are paid for up to two weeks' absence, but if the absence continues beyond that the employee is visited at his house by one of the firm's executives who weighs up the situation and makes his decision according to circumstances. In small businesses where the few office workers are personally known to the executive the point is not important, but sickness records are of tremendous help where a

bigger office staff is concerned. Where it is known that sickness records are studied by the management unfair exploitation of absence-through-sickness regulations is almost negligible.

Whatever ruling is laid down about sickness-absenteeism, however, it is always advisable to see that all employees, upon engagement, are fully informed about it. Where possible, make the conditions figure in the specific terms of engagement, then there can be no kicks about it later.

Work - Output and Employee - Comfort Were Objectives in Building the "World's Most Modern Offices"

THESE two pictures show the sort of equipment designed for what must be one of the best-planned business houses in the world.

When S. C. Johnson & Son, of Racine,

would find real happiness in working.

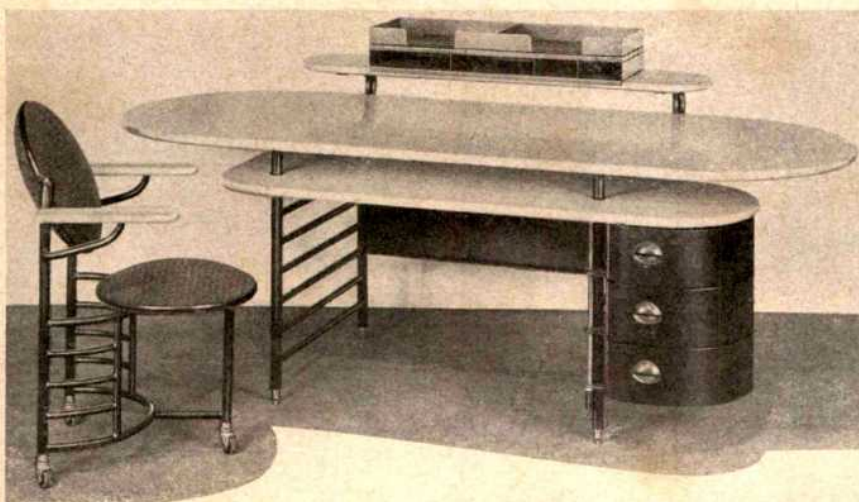
Wright spent weeks studying the work flow in the old building. Particularly did he watch physical movements of personnel: he looked for unnecessary getting up

from desks; walking about from point to point; the way desks, files and so forth made demands on physical energy.

Result of all this research was finally a building that has attracted the close attention and interest of business men throughout the length and breadth of the United States. Newspapers, magazines, trade journals, movie news reels have sent their men from all parts to get stories and articles about the Johnson-Wright building—the "business building of the future."

A well-known business consultant said about it: "It offers a place to work where there is less lost motion, fewer needless steps than in any other building I have ever seen. The setting itself provides an incentive to keep busy: there are no windows to gaze through, no draughts to annoy, no noises to disturb, no glare or shadows to give headaches, no dust or dirt. Everything is to hand, comfort and simplicity are the keynotes."

The top picture shows the special type of desk and chair designed for the general staff. There are some 300 of these desks. Note the triple surfaces, of polished white maple. Work surface is the largest;



Above: Three level desks were standardized; over 300 of them for the general offices. Similarly, 3-point suspension chairs. Right: Executive offices planned along same lines

Wisconsin, U.S.A., needed to expand, H. F. Johnson, Jr., head of the concern, dismissed as mere compromise all idea of extra stories or additional wings on the old building. He decided on a new structure and gave *carte blanche* to Frank Lloyd Wright, an architect who had won renown through his Imperial Hotel at Tokio. When the last earthquake practically razed that city, the Imperial's structure revealed not an inch of "shift."

Wright got *carte blanche*, but when he asked if a "modern" style was preferred, Johnson replied that he did not care what style the building was so long as main consideration was given for the work to be done inside it and for the employees who would do that work.

Johnson was determined to have, and Wright was anxious to erect, a building in which the employee, through the common-sense efficiency of the facilities provided,



beneath is a useful ledge for anything the user needs to have near at hand; small top is for the standardized "in" and "out" document system.

The rounded drawers are hinged and swing silently forward in an arc.

For typewriters and other equipment such as calculating machines, card indexes, etc., each desk is built with a special recess to house the particular equipment.

The chairs, of which there are nearly 600, are 3-point suspension, fabric-covered rubber cushioned, silent casters.

We regret space does not permit our showing the filing and mechanized equipment of the general offices. But in addition to symmetry and convenience, silence in operation has been provided. Files have silent drawer action; movable items glide on silent ball feet.

Our lower picture shows a typical executive office—same standardized desk (but in walnut) and chair.

Colour scheme of the whole interior has been carefully worked out, but it is revolutionary: typifies *brightness*, while at the same time being non-aggressive and harmonious. Natural daylight through glass bricks and opal panels give soft, shadowless lighting.

Output Up 10% Without Further Incentive

John R. Ramsey, secretary and general manager of Johnsons, has stated: "Without any effort to check, for we have been in the new offices only a few weeks, we heard quite accidentally that certain departments were turning out 8 to 10 per cent more work. Investigation proved this to be true. But we believe the building fulfils Mr. Johnson's ambition to extend the company policy of doing everything in

our power to bring comfort, efficiency and healthful surroundings to every employee."

A well-known American magazine replied that Mr. Ramsey has uttered a classic understatement.

We should mention that desks, chairs and all office furniture for this new Johnson building was made to Mr. Wright's designs by Metal Office Furniture Company, of Grand Rapids, Michigan.

Make Office Work "Flow" It Cuts Costs, Raises Output

By HAROLD C. PENNICKE

IT is estimated that somewhere about 80 per cent of all office work is handled on routines by more than 70 per cent of the entire office personnel—executives and clerical workers combined. But in the great majority of offices no *flow of work* exists. Work doesn't flow, it jumps spasmodically—about the most expensive manner in which work could be moved.

The importance of routines, flow of work, and proper physical layout of equipment is indicated by the fact that in the average office, if every routine is studied and corrected, a payroll saving of from 10 to 25 per cent or more can be effected, while volume capacity can be increased 25 to 33½ per cent.

The volume and nature of the work to be handled will largely determine the kind of flow to be used. Work may be moved according to time intervals, as,

for example, by means of a regular 30-minute desk-to-desk messenger service operating on a regular route. The work may be conveyed directly to the respective desks, or delivered to the departmental supervisor and distributed by her within the department.

Another type of flow is that which moves both as to quantity and schedule—e.g., the "block system," a widely used device for handling large quantities of orders. The average number of orders to be handled daily is determined, and the time required to handle a "block" of orders is established by time-studying each step in the routine.

For example, 2,100 orders are to be handled within seven hours and 50 minutes, which have been divided into five-minute periods. There are 84 periods, or blocks, in the day. By

(Continued on page 31)



One Machine does the work of Two

Continuous Form Billing in addition to regular typing

Your typewriter actually does the work of two machines when used with "Fanfold" Continuous Form Adapter, because the many time and money-saving methods of the Continuous Form Billing Machine are added to all the advantages of regular typing.

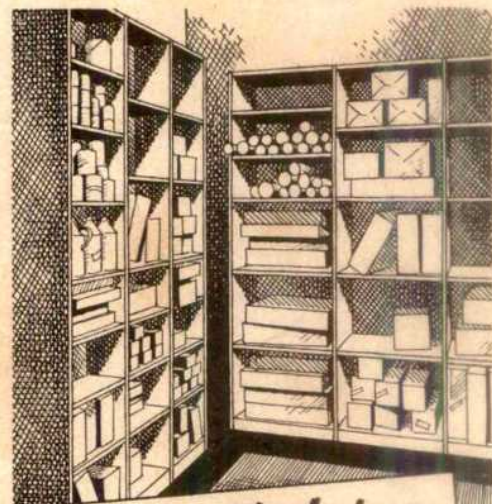
"Fanfold" Continuous Forms typed over our Attachment effect savings in Billing time and costs, ranging from 17% to 78% without affecting the operation of the typewriter for regular correspondence and other purposes.

"Fanfold" Adapter places no strain whatever upon the typewriter carriage; because of the very simplicity of construction and operation there is nothing to get out of order.



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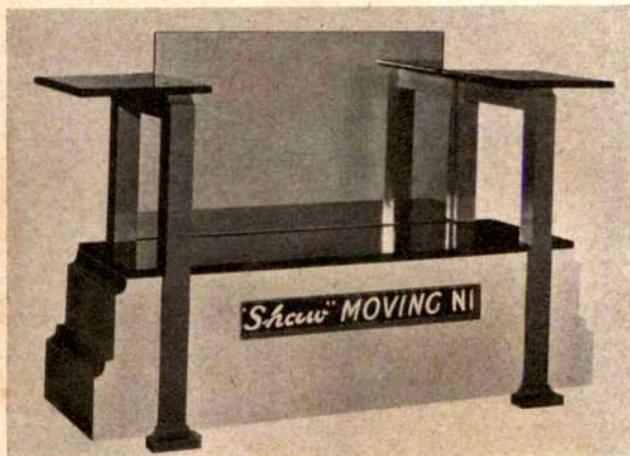


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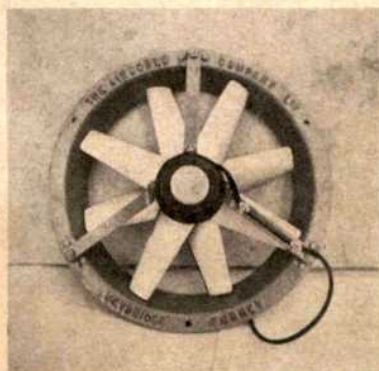


Left: And now, moving neon signs combine the intensity of this characteristic light with the attention-getting value of the moving news strip. Letters are easily interchangeable and are unbreakable. These Shaw signs (Neon Illuminations Ltd., 60 Newman St., London, W.1) are as suitable for small indoor displays as for outdoor sites of large size, and can be had on h.p. terms

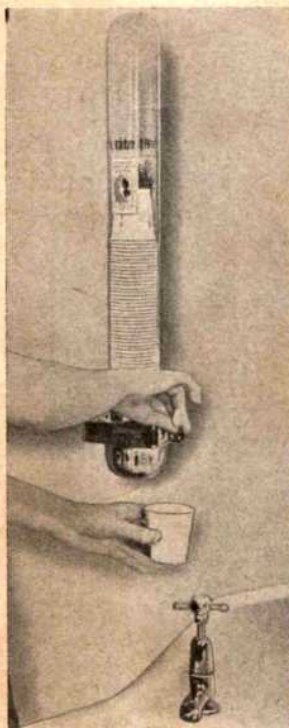


Above: To meet the demand in many new offices for indirect lighting units of greater efficiency and higher power, Benjamin Electric Ltd. have brought out these Anolier Reflectors. They take lamps from 200 to 1,000 watt sizes. The lower cup is easily removable, thus enabling a person to clean the reflectors without having to climb above the fittings.

This banishes the great drawback of previous indirect units which were rarely cleaned because of the difficulty. And it should be remembered that dirty bulbs, shades and reflectors can absorb up to 50 per cent of the effective light you pay for



Made by a famous firm of aircraft propeller manufacturers, this 'Airscrew' fan with wooden blades reinforced by a skin of glass-hard plastic, has advantages for the business concern. Due to its low first cost, silence, absence of vibration and imperviousness to damp, chemicals and grit, it is claimed to give the highest efficiency at the lowest cost



Left: The Factories Act says: "One or more suitable cups or drinking vessels shall be provided at each point of supply." But fast supplanting the unhygienic 'common' drinking cup are these paper cups which come fresh from the container for each drink. These are appreciated by office workers, especially female employees, for whom the bubble-fountains used in factories are not suitable. From Hygrade Industries Limited, London, S.W.1



Whether in the office or the factory, properly designed seating is as important as good lighting if efficient work without fatigue is to be maintained. Evertaut's new catalogue illustrates a range of scientifically planned seats, from the latest for top executives to equally scientific seats for office and factory employees. It also displays new lines in shelving, lockers, and other steel equipment. Free copy from Evertaut Ltd., B'ham, 22



This built-in stand makes the Underwood Portable still more of a "use it anywhere" machine. The stand adds less than 5 lbs. to the weight; the legs lock automatically into firm position; and will support a pressure of 150 lbs.

Make Office Work

"Flow" (Continued from page 29)

dividing 2,100 orders by 84, we have 25 orders to the block. Therefore, if it requires five minutes to handle 25 orders on each step, and there are 10 steps in the routine, it will require 50 minutes to put each block through the routine. With 84 dispatching periods in a working day, we are assured that, so long as the schedule is maintained, 2,100 orders will have been cleared at the end of the day.

Sufficient personnel is assigned to each step, so that, regardless of the varying amount of time required to handle the block, in each step the work is so balanced that no more than five minutes will be required to clear the block.

This is the most complicated, yet the most accurately adjusted, of all flow methods, and is widely used where great volume of work must be handled and speed is a major requirement. *From NOMA Forum.*

The Law About the H.P. Moratorium

(Continued from page 19)

the correct word is "mass") of County Court cases will arise in which it is impossible at present to foretell the principle that will be adopted by the County Courts in the exercise of their powers under the new Order.

The Order, wherever it holds up proceedings by the Owner, imposes no restriction upon the use of the hire-purchase article by the militiaman and his family during the period of moratorium. In the case of articles rapidly deteriorating by use, such as cycles, radio, clothes, etc., this aspect of the matter seems to be attended with some seriousness; and as argument has been adduced founded on the provisions of the Hire-Purchase Act, 1938, it should perhaps be pointed out that the operation of the new Order is by no means confined to transactions within that Act, or of similar size. Should the debtor be the hire-purchaser of a £2,000 motor-car, his liabilities come

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Numbers (see Index, page 5).....

Firm

Address

under the Order for suspension, and the seizure rights of the owner are barred, just as much as if the transaction were for a £6 bicycle.

Light-Obscuration Costs Cut by 75%

(Continued from page 23)

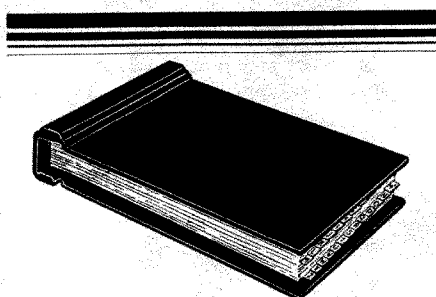
adjusted, or slipping, and so allowing unobscured light to be visible outside.

This light-shade system, too, is better than any plan which involves the painting of windows with translucent colour. When windows are painted the natural light during daylight hours is obviously sacrificed, so the manufacturer suffers a permanent handicap at times when it is quite unnecessary.

There is another point, too, in favour of the "obscurer-shades". They can be left permanently fixed to certain lights. For example on lights in corridors, lavatories, building entrances and exits, on stairways, in first-aid rooms, at A.R.P. shelter entrances, in transport yards, and so on.

There *must* be lights at these points, whatever the emergency. In fact the greater the emergency the greater the need for panic-saving illumination. But, human nature being what it is, somebody may forget to obscure them when the warning sounds.

With the shades fixed, however,



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nobody need worry about these key lights. They can be "on" all the time: they will give adequate illumination: yet they will meet the needs of "black-out," no matter if unobscured windows or doors are all around them.

To get back to the matter of costs. These shades would enable the radio manufacturer (who, by the way, has seen this new shade) to reduce his light-obscurer costs from over £7,500 to about £1,800.

The costs for the office building would be reduced from £800 to £200 a floor; while the small furniture maker would have to find only £250 instead of £1,000.

And, of course, every office and factory building in the country could

make a similar 75 per cent saving, with the added advantages of improved controllability and lessened risk of accidentally violating the law.

Incidentally, though it does not come within our scope here, the same saving and advantages apply in the home.

To buy even the cheapest usable material, even for tacking up, costs on the average 3s. 9d. per window, an average of £1 6s. 3d. per small house. A big sum for working class people whose margin beyond "necessities" is very small. And fitted blinds, of course would cost a good deal more.

The obscurer-shade system would bring this cost from £1 6s. 3d. down to 14 shillings per house of the same size

Every Year Rheumatism Steals 3,000,000 Weeks' Work

The cost is somewhere about £51,000,000, but the business men who have to foot the bill can help to reduce this enormous burden on profitable industry

Says SIR FRANK FOX

RHEUMATISM is responsible for one-sixth of total illness in the "insured" class of population. Three million weeks of work are lost every year; the annual cash loss in wages and insurance totals about £17,000,000. Multiply that sum by three and you get the approximate total economic wastage from rheumatic disease. And industry must pay it in some form or another.

The Empire Rheumatism Council, founded in 1936, has undertaken the task of stopping this wastage. How is it tackling the job?

(1) By intensive research into the causes. It has set up several research institutes. One of these is investigating the cases of 40,000 young men among whom there is a serious incidence of rheumatic disease.

(2) By organizing methods of treatment to be made available in the early stages. Statistics show that at least 60 per cent of sufferers can be cured.

(3) By educating the public as to the factors in their life (occupation, diet, housing, etc.) which promote onset of rheumatic disease.

To the business chief all three lines of effort are important. He will recognize the value of research leading to prevention. He will appreciate the need to organize treatment. It is bad economy to allow thousands of workers to drift into hopeless incapacity.

Occupations which promote rheumatic disease involve (a) exposure to cold or damp, (b) quick alterations of cold and heat, (c) liability to frequent bruising injuries, (d) cramped position of work, (e) constant repetitive movement using only a limited number of muscles. They are liable to bring on rheumatism in those who are predisposed.

Measures of precaution are simple: (a) and (b) by care as regards clothing and (c) by prompt, simple attention to bruises and minor sprains. The factors (d) and (e) are not quite so easy to deal with. But cramped working positions are not always unavoidable. When they are, the worker should be encouraged to follow regularly some simple remedial exercises.

Bad effects of constant repetitive movements by a limited set of muscles can be avoided in the same way. Sometimes it is possible to arrange at intervals a slight change in the movement. Under headings (d) and (e) two or three minutes allowed occasionally out of the working time to loosening and stretching movements would help. And you would get better output.

The Empire Rheumatism Council willing to help business firms with advice affecting rheumatic disease. In return firms can help in fighting the disease. Write to the Council at Mitre Court Buildings, Temple, London.



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work that the need for increased staff can be materially deferred.

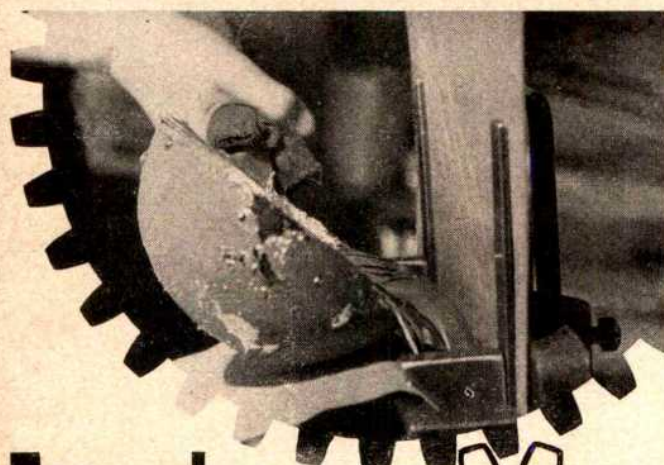
The Dictaphone is the ideal means of dealing with the letters, instructions, reports and memoranda that play so large a part in business administration. You never wait when you wish to dictate. The Dictaphone is a super-efficient private secretary always instantly ready for work.

That is its secret—instant readiness for work at any moment. You talk to The Dictaphone exactly as you would to your secretary or anyone else you desire to address. Tell it exactly what you like—letters, reports, memoranda, minutes, telephone calls—anything you want recorded. Then all your executive thought is instantly caught and fixed—documented beyond the possibility of mistake, neglect or forgetfulness. You save time, labour and money to the benefit of yourself, your staff and your company. Let us tell you more about

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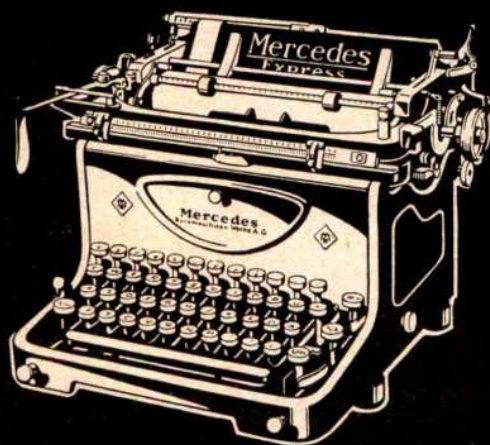
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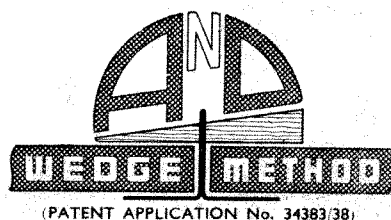
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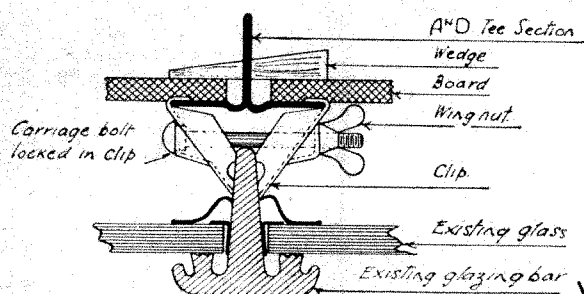
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For vertical windows on upper storeys, it may be found more practical to obscure internally from the point of view of accessibility and cost, and, in view of the likelihood of labour shortage in an emergency, simplicity of fixing would be a vital factor. The ease with which panel and hard boards can be fixed, therefore, is a great advantage, and, although they are not the cheapest, they will most effectively withstand concussion and replace broken glass to advantage.

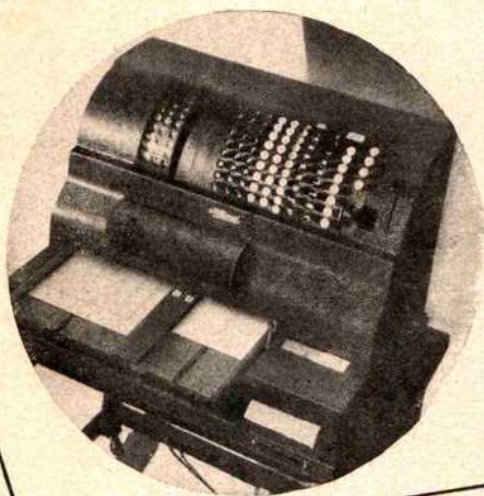
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SEPTEMBER, 1939

Principal Contents and Features*(Authors' names appear under headings of the appropriate articles throughout the pages)***Management : Control : Policy**

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BUSINESS**Annual Survey**

of

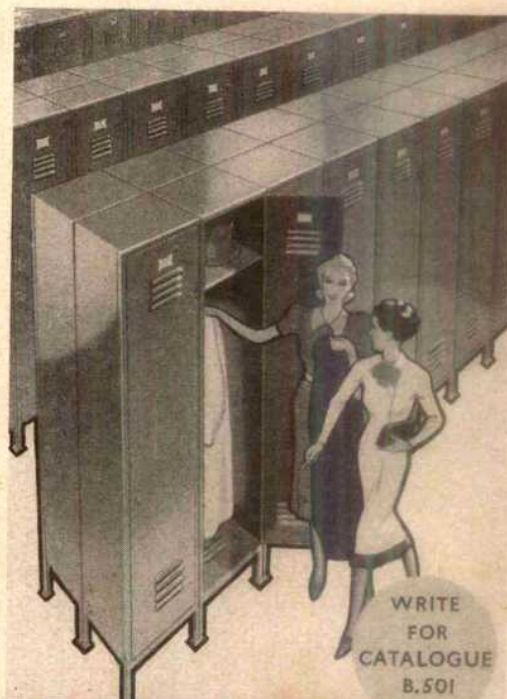
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for

FACTORY, SALES, & GENERAL OFFICES

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No. 9

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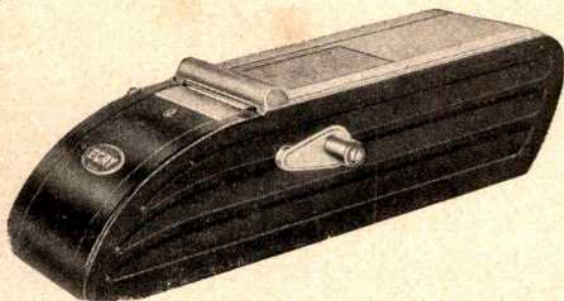
We shall be exhibiting at
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hibition, Olympia, London.
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**STAND
74**

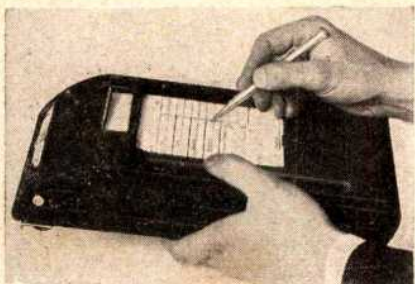
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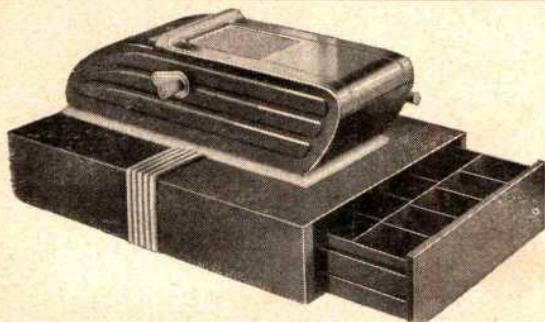
The Egray systems are a mechanical book-form of multiple recording. They save at least 30 per cent of typists' time on such tasks as



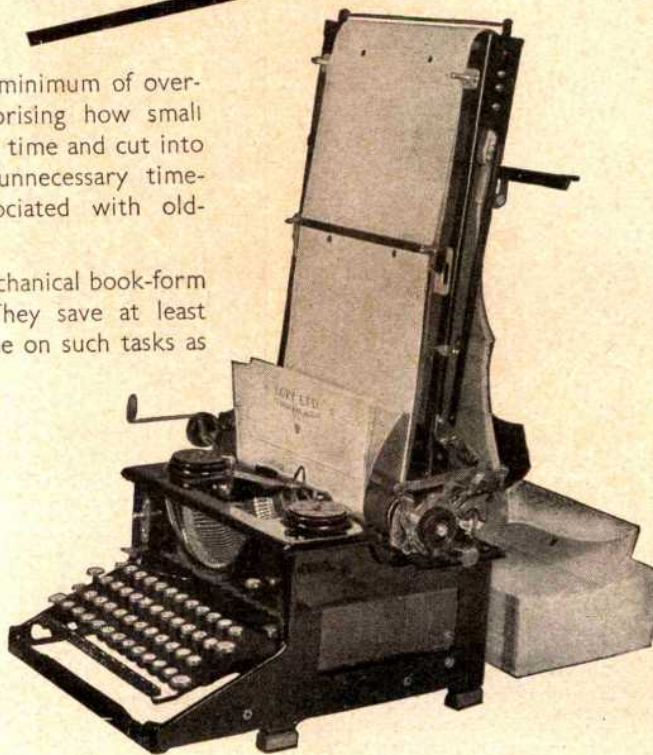
The Egray Trupak Autographic Register is for stationary departmental use where more or less continuous recording of invoices, statements or stock-room charges is being made



The Egray Handipak Portable Register lends itself to recording transactions en route in connection with the duties of roundsmen employed by bakers, laundries, dairies and similar organisations



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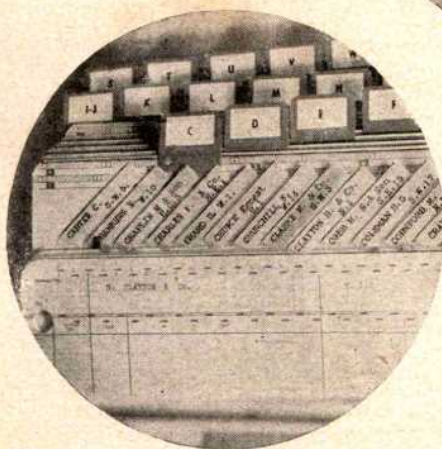
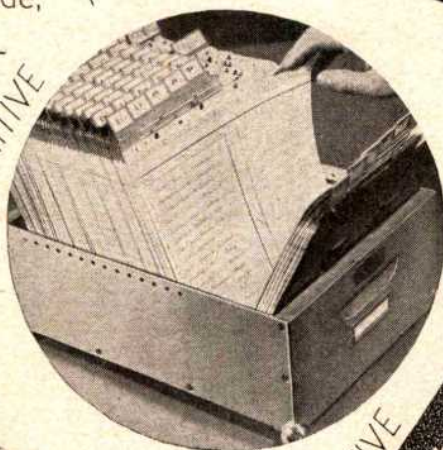
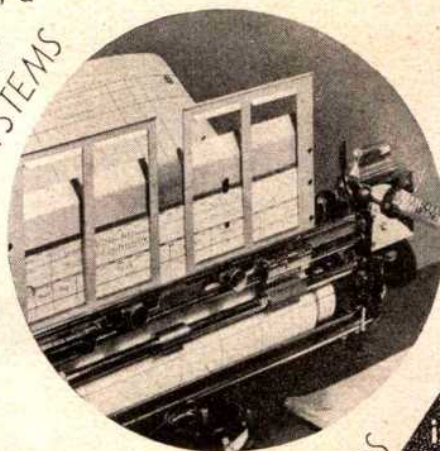
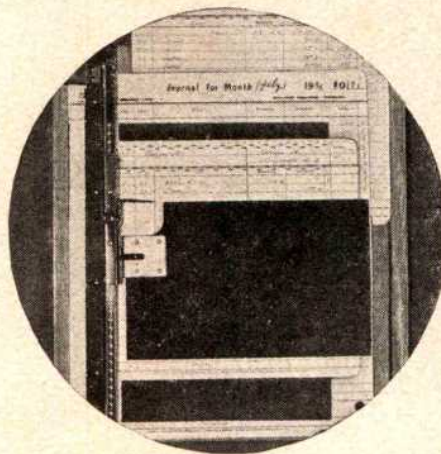
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Busy Times Don't They Prompt Us to Improve Our Products and Methods?

Says **S. G. BROWN, F.R.S.**

Chairman, The Telegraph Condenser Company Ltd.

ONE of the greatest dangers of prosperous times to the manufacturer is the tendency to be lulled into a mental state of happy complacency.

With the order book well filled, the works running smoothly at a comfortable high pressure, distributive outlets flowing briskly, complaints few and far between, and the immediate future showing no tendency to cloud up, it is fatally easy to take a lot too much for granted and to be betrayed by this seeming security of the present into neglecting for a moment the needs of the imminent future.

To the astute business man all these prosperity signs are signals, not to "go easy," but to redouble his work on defensive plans.

To those concerns whose busy-ness to-day is due, in any part whatever, to armament contracts the need is doubly urgent to be vigilant and enterprising in regard to maintaining or creating alternative spheres of work.

Know Exactly How Your Civilian Markets Stand

No armament boom ever lasted long: nor did it ever recede with a convenient gentleness. The cessation was ever abrupt—and severely damaging to those firms left to weather the reaction without fully prepared plans of alternative work and markets.

Where a campaign of these "secondary" plans has not yet been fully worked out, therefore, the following lines of thought are vital at the moment.

Continuous improvement of the product and the consistent raising of the "value for money" standard are the outstanding factors on which Mr. Brown has built his own successes. He contends that the more confident the business outlook the more closely should manufacturers address themselves to these things

While busy with priority government work, it is necessary to determine to what extent, *exactly*, civilian markets are being held. For instance, are they being merely "held," as distinct from actual development? If so, is the consolidation sufficient to permit a re-start, without serious loss of ground, when civilian output again becomes the thing? To hold a market in a more or less stationary condition is actually more difficult than actively to develop it, a fact that is not always realized.

Measures for ensuring these markets being held include clearly explanatory advertising in the trade papers. This, coupled possibly with appropriate direct mail, will keep distributors and dealers informed of the policy and still favourably disposed towards the firm and its products. To lose the goodwill of the distributive trade through seeming neglect would obviously be a serious barrier to a quick re-start when the time comes.

Very important, too, is to make sure that whatever the limited proportion of

output allocated to these markets, distribution of it is made in the very best possible way to give the most effective coverage. Also, it should be ensured that the all-important matter of service, both to stockists and customers, should *not* be left in the indifferent hands of subordinate people who can probably be well spared from the priority work. On the contrary, efforts in this direction should be redoubled in an attempt to make up in one direction that which it is impossible to give in another.

More Than Ever Now, Service Is Important

Good service and the prompt attention to detail are always appreciated, but at a time when customers are asked to make concessions and allowances to the suppliers it would be folly to expect them to do so and at the same time put up with unnecessary difficulties and neglect. Customers lost in this way would be driven straight into the

hands of competitors, probably never to be regained, no matter what efforts were subsequently made on a return to normal conditions.

Another important point to keep an eye on is the sales force, and this for two reasons: In the first place, reliable salesmen, trained and experienced in a firm's particular methods and products are assets that should be well safeguarded. Therefore hold on to them. A quick re-start or change-over is not possible where new men have first to be sought and trained.

To Retain Your Trained Salesman Is Vital

Salesmen are usually the least stable members of a business organization. Special pains should therefore be taken to explain the position fully to them, to give them the reasons for the company's policy and to make them feel secure in the temporary conditions. If this is not done the best men will probably drift away—as likely as not to competitive firms.

Secondly, the field force, though they may have to refrain to some extent from actual selling, can do extremely valuable work among their customers. By intelligent ambassadorial work they can keep their customers' goodwill. And if they do nothing more than this, their cost will be fully justified, and the pains taken to retain them with the organization will be well recompensed.

The circumstances of every individual firm, of course, are different, but, followed in principle, the above suggestions will be found worth while.

It will probably be true to say that in the case of the great majority of firms the mere "holding" of civilian markets is not enough. It will be generally more essential to develop and expand these markets with unabated vigour.

The head of a large engineering firm, expressing a grievance against the Stock Exchange, was quoted last month in a London newspaper as saying: "The price of our shares is an insult to the company. It shows that the stock market and the investing public consider that when the arms programme comes to an end we shall immediately start to lose money. It gives us, and many others, no credit for having any foresight or adaptability in the conduct of our business."

True, many firms are keeping themselves prepared for this return to normal lines of business, but may I, in this connection, suggest one or two avenues of thought to those firms that perhaps have not yet given this vital matter sufficient attention.

Busy-ness on the priority work of government contracts should not on any account be allowed to hinder the continuance of product-research in the civilian field. It is not enough to maintain, or even expand, normal business merely to the extent of getting more orders, valuable as that activity is in its way.

The same research and inquiry should be directed on to the product itself, as

is done in ordinary times. Now, more than ever, it is necessary to improve the product, to find fresh selling points for it, to discover new uses for it, or in some way to give it renewed life and fresh appeal in its markets.

In addition, there is every advantage to be gained by searching about for new lines to manufacture. Conditions have been fast changing in the past year. New needs have arisen by the score. To realize this one has only to look at the tremendous variety of new products, and fresh uses for old ones, that have arisen since the passing of the Factories Act, the A.R.P. legislation, and the Military Service Act, all of which are measures that have come to stay, for a considerable time at any rate.

But apart from new products called into being, directly or indirectly, by legislation, the normal fields of domestic requirements are as eager as ever to accept new lines, or fresh adaptations of old ones.

On the contrary, however, in some sections of business, notably in the semi-luxury fields, sales resistance has increased considerably. The fear complex, together with the influence of general unsettlement have been, and still are, operating to such an extent that consumer spending has fallen to alarming low levels.

For both these reasons therefore—that of new opportunities on the one hand and of increased sales resistance on the other—fresh ideas must be sought.

Intensify product research, therefore, with a view to strengthening the near-future position of production and sales.

Conjointly with improvements or changes in product design goes the need for a full examination into the condition of plant and manufacturing methods.

Why NOW Is Best Time for Business Overhaul

Paradoxical as it may seem to some business men, the time of prosperity is the very time to do plenty of overhauling among the machines and routine methods used in conjunction with them.

Among the reasons why such a time is good for this purpose, not the least of them is a psychological one.

In times of prosperity the average business man is more liberal in his views and more readily prepared to consider money investments in plant and method improvement. In lean times he is generally in such a frame of mind that he is loath even to consider spending money on new and better equipment that would literally go a long way towards rescuing him from the slump conditions to which he is a prey.

It is generally this frame of mind that drives some business men to cutting down their advertising as a first (imagined) economy when things begin to go badly. Paring down advertising is DE-structive, not CON-structive cost cutting and is usually the first of those

in-swinging movements that start the deadly vicious circle.

Apart, however, from any consideration of psychology, the busy time is the best in which to notice weaknesses both in plant and in methods. Work can be observed at full pressure, and the least hindrance to smooth, fast-flowing movement can be noted and the cause tracked down and removed.

In this campaign of organizational and equipment overhaul no consideration of tradition or opposition in any form from individuals should be allowed to prevent a responsible executive of the business from investigating right into the smallest detail. A detail, when looked at in terms of a year, can quite well represent a lot of money.

For example, it came as a surprise to one firm when investigation showed that £3,000 a year could be saved on their print bill merely by doing away with redundant office forms and simplifying the remainder. Another firm, in a year, by means of a new system of stock control, reduced by £30,000 the cash formerly locked up in the raw material stores. Another firm, a bleach works, as a result of looking over equipment in the power house, put in a new combined power and heating plant and saved £6,000 a year in fuel, also reduced production costs by a shilling per piece of cloth.

Don't Wait To Be Guided By Complaints

Now it is important to notice this. No complaints of any kind had previously been made about the routine or the plant at any of the points where these economies were made. Nor had any breakdowns or noticeable hindrances occurred. On the contrary, everything had appeared to be working smoothly, as usual. And that is the state, that deceiving condition of "routine running as usual," which lulls too many business men into satisfied complacency.

In each of the above cases (and many more could be cited) where substantial improvements and economies were made *the initiative was taken by the investigators.*

This demonstrates in the clearest possible way how vitally necessary it is to take deliberate action and to probe constructively into every corner of the business.

To wait for complaints or breakdowns is a fatally retrograde policy.

Successful business management involves the probing, testing, trying of equipment and method, not every once in a long while, but every month—every day at some points. So quickly is new and better equipment developed, so frequently are systems, methods and services improved, that unless the business man is constantly measuring his organization's performance against these ever-advancing standards he runs a serious risk. He risks missing those possible economies and improvements which are the very things that will enable him to keep his company profitably forging away ahead of competition.

'Substituting' for Those Military Service Absentees



From an Interview with

ARTHUR MASKELL

Labour Manager

Vauxhall Motors Ltd., Luton

better case than might have been expected. In fact, it can be said that they are not in any real difficulty at all. This almost complete immunity, so far as I could see it, is due to two important factors: (a) the condition of its business and (b) the widespread reputation of the firm as being unique among employers.

Explanation of the first factor is this: Vauxhall's manufacturing programme, a month or so ago, reached a point of necessary expansion that would, in any case, have demanded the taking on of a considerable number of additional employees in the works.

The exodus of their men to the colours, therefore, simply caused Vaux-

hall's to act immediately, instead of gradually, in the matter of taking on additional men. They decided to take on at once, a big draft of new men to fulfil the double purpose of (a) substituting for the temporary absentees and (b) constituting the nucleus of the extra staff needed to meet the firm's expansion programme.

As Arthur Maskell told me, therefore, there will be no question of subsequently dismissing these new men to make room for the regular Vauxhall employees who will come back for reinstatement in their jobs after military training is over.

In this happy condition, therefore, Vauxhall's will escape a problem that with many firms, in the fullness of time, will become acute.

The second factor is a very important one and is now standing the company in good stead.

Getting Those "Hard-to-Find" Skilled Workers

At a time when there is an admitted shortage of skilled men throughout the country, how can Vauxhall's suddenly conjure up a big draft of suitable men at, as it were, a mere wave of the hand? I know they can find such men. On the day I went over to talk with Mr. Maskell I saw at least fifty awaiting

THERE is hardly a manufacturing concern in the country that is not, to some extent at any rate, feeling the drain on its staff made by the exodus of men to the Militia and to the training camps of the Territorials and the Reservists.

In the case of the compulsorily called-up Militia the men concerned, of course, are youngsters not, in the majority of instances, skilled men in important positions, but nevertheless many of them are young men making very important beginnings.

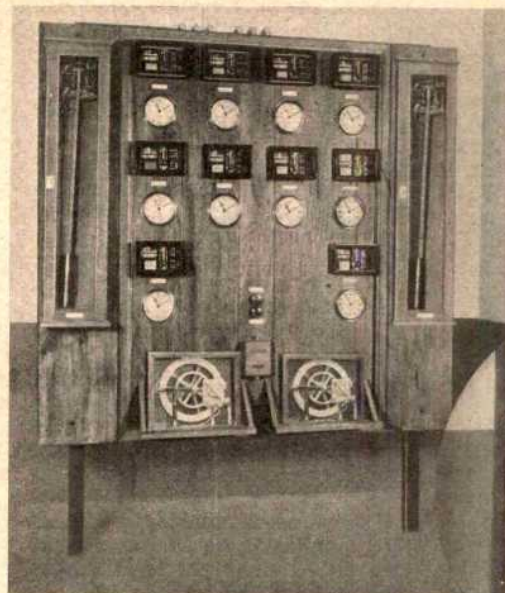
The territorials, however, are in a different category. Here, mostly, are men in the later twenties and the thirties, mature workers, many highly skilled, in key positions. The reservists, too, are, without exception, mature workers.

Thus this call to military training is making its demand throughout all the effective production ranks of industry.

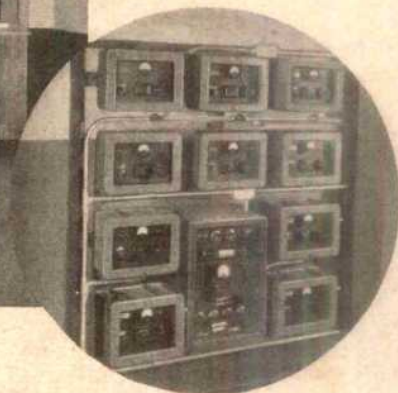
Why Labour Shortage Not Badly Felt Here

In the case of Vauxhall Motors, Ltd., more than four hundred men have already been called away for their National Service training. The absence of four hundred men, of course, even from a total staff of about 9,500, makes a considerable difference to a firm's organization, especially where a very exacting manufacturing programme of precision work is involved.

Despite this diversion of man-power, however, I found Vauxhalls in a far



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their catechism. And the application forms in Maskell's office clearly indicated that the waiting fifty were but a small part of the total number seeking entry into this famous factory at Luton.

There's a Moral Here for Employers

I went through some of those application forms, just to be assured that these men really were of the quality that is, supposedly, so hard to find, and that the queue-up was not bolstered with indifferent characters and unemployables. The qualities I found were sterling enough: sound men of good—many of superlative—experience.

How, then, is it done?

As Maskell assured me, and as I know from some years' experience of this company, the Vauxhall reputation as ideal employers is responsible.

It is really amazing how such a fact travels through and through the ranks of labour wherever it is, in all parts of the country. Men talk among themselves; they compare jobs, bosses, working conditions, and so forth, with the utmost candour. Unpleasantnesses are marked down and receive their ruthless criticism, but scrupulous fair dealing, honestly helpful co-operation from the management, and, above all, any of those little *extra* amenities and courtesies are recognized by men and commented on with equal readiness.

In the engineering and allied trades the Vauxhall policy of ideal personnel management is known throughout the land. This, therefore, is the secret of the full response to Maskell's call for men at a time when good engineers are at a premium.

There is a moral here, and a very vital one, for any employer to observe.

While, however, the main problem of substitution is thus very much reduced at the Vauxhall works, the drain of trained men to Military Service is, naturally, creating many small problems of detail adjustment. In fact, it is creating a state of continuous adjustment that will remain more or less constant while the condition of Military Service lasts.

No Fixed Policy Possible for "Substitution"

Mr. Maskell told me, therefore, that in filling the jobs temporarily vacated by men away on Service it is not possible to follow any fixed policy. For instance, vacated key positions or positions on skilled work are filled simply by re-shuffling, to the best possible advantage, the labour that remains in the particular shops concerned, *plus* the possibility of putting in, here and there, any specially qualified man from outside.

In this sort of readjustment of work, too, even small things can make a big difference. For example, on a particularly fast piece of assembly work any man is noted who, for any reason, has difficulty in holding the pace. He is put

on to less exacting work, and a more virile man is substituted.

Where possible, also, operations are broken down to still greater simplicity so that they can be carried out by less skilled workers.

Similarly, where possible, more jobs are stepped up on to a mechanized basis so that a machine can take the responsibility, permitting again the employment of the less skilled man.

One thing, however, Vauxhall's will *not* do. They will not allow women to be filtered into men's work. This practice, of course, is well known in some engineering trades where it is desired

to "dilute" the labour, reduce costs, and, to some extent, to meet this problem of the shortage of skilled men.

In some businesses of course this policy may be quite good practice, but the Vauxhall management is dead against it. As Maskell told me: "We employ only about 90 women; they are on sewing machines for trimming and similar work where women's skill is especially appropriate. But we believe that the presence of women in the general shops does not tend to raise the standard of so scientific and technical an undertaking as commercial engineering."

Easy-Seeing Steps-up Output in Office and Factory

It also lowers costs by enabling better quality work to be done, and by reducing absenteeism through petty illnesses

By FRANK D. PIGGOTT

Secretary, British Sight-Efficiency Committee

AT first thought it may seem of little interest to a business executive that an hour's reading in different light reduces the heart beats in a healthy human being by as much as 10 per cent.

The significance of this is that long spells of reading—indeed, of any form of concentrated close-range work—fatigues the human system. The harder the seeing-task the greater the fatiguing effect. Even under good seeing-conditions close-range work still fatigues.

Lighting is Not the Only Consideration

This term, "seeing-conditions," covers many factors. Lighting is one, because light is necessary to sight. The arrangement of the work is another factor. Posture is another. The *state of the individual worker's sight* is another.

To-day, lighting gets a great deal of attention, and justifiably so. Yet the amount of notice it has received has tended to strengthen the impression that better lighting itself will give the maximum efficiency which is to be expected from ideal seeing-conditions. This impression is wrong.

Figures are available which indicate that a nation-wide survey of workers' eyes would show not less than 45 per cent to have eyesight defects. Better light may, of course, improve the efficiency of these people, but only up to a point well below the maximum if their sight defects are uncorrected or wrongly corrected.

Further, there are many workers who enjoy good sight and whose jobs are performed in ideal lighting conditions but whose efficiency could still further

be improved by better arrangements of work and by a changed posture.

To revert to the question of fatigue due to use of the eyes. It is proved that such fatigue causes inefficiency. Just how much inefficiency it is difficult to say: a comparative standard is not always available.

The diminished heart beat due to eyestrain is, however, symptomatic of a general physical deterioration. The obvious signs of this are headaches, faulty concentration, "inexplicable" errors in critical work, loss of time, accident proneness, depression and, perhaps, definite ill-health.

When these things are caused by the fatigue consequent upon eyestrain they are avoidable. The method of avoidance is simple and inexpensive—all eyesight defects must be accurately corrected by glasses. Then, but only then, has the executive a real chance of improving production both qualitatively and quantitatively, by improving such material seeing-conditions as the illumination, arrangements of work, posture, and so on.

Don't Be Misled By This Fallacy

At this point let me direct the attention of staff managers to a prevalent misconception, *i.e.*, that a prospective employee who does *not* wear glasses is potentially a better-sighted individual (and, therefore, potentially more efficient?) than one who wears glasses.

The contrary is often the truth. A man or woman whose sight defect is properly corrected by glasses is equipped for ease of seeing. A man or woman who does not wear glasses may not be so

(Continued on page 70)

Management Causerie

By THE EDITORS

It's An Ill Wind . . . Etc.

AT THIS MOMENT of going to press it is still crisis: nobody can say whether, in a few hours, there will be war or peace.

However, if, as it is sincerely hoped, the decision is *against* war, then we shall be able presently to look back upon the crisis and realize that, for many businesses, it did at least one good thing: it brought about a lot of very desirable decentralization.

Decentralization Teaches a Lesson

UNDER STRESS of the national emergency there is a widespread undercurrent of movement going on. Scores of firms in the London and big provincial city areas are decentralizing their offices into safer regions.

The head offices of some of the big combines are already almost empty. Directors and staff, with equipment, have decamped and have re-located on the factory sites.

Such a move is all to the good. There is strong opinion in financial circles that the growth of some of these combines has exceeded the point where they are really sound manufacturing undertakings.

After this flight from the centre it is considered by many business men that the advantages of decentralization will become obvious and that some of those vast head-office complexities will not be restored.

Small Firms, too Are Learning

SMALLER FIRMS, too, are learning from their enforced decentralization. For example, moves of this kind have necessitated executive overhaul of detail to an extent never before attempted.

Actual moving, of course, proves to be a fairly expensive process, involving as it does the buying or renting of additional premises and possibly the duplicating of some equipment. But the economies that are being discovered will remain for useful adoption in the normal conditions to which we hope soon to revert.

Surplus Records by The Ton

MOST FIRMS, for instance, have discovered that they keep far too many records. One small firm alone, in selecting records for photographing and safe-deposit in a country bank, destroyed more than a ton of letters and documents that were quite uselessly housed in steel filing-cabinets of a modern and not inexpensive type. In fact, the managing director of this small firm was

amazed when he learned how much money was tied up in good filing equipment and how much space was given over to the accumulation.

This executive was not a man to begrudge money on good equipment but, as he told us, he would rather spend it on equipment that would help to get business than on something merely to house valueless relics.

If a firm employing only about 30 people can destroy a ton of surplus records it would be interesting to know what some of the much bigger concerns could profitably scrap if they really dug into the problem.

Chances For Constructive Cost Cutting

ANOTHER POINT where some managements are discovering that econo-

mies are possible, is in connection with the allocation of work.

Moving premises often involves the splitting up of staffs, with the inevitable re-allocation of duties.

It is being found that some jobs, formerly considered a standard part of the firm's routine, are quite unnecessary to the business. In other instances methods and processes are being discovered as needlessly long and involved. In still other cases it is being found that separate jobs can be grouped, or that hand-processes can be done by machine, and so on.

Handled appropriately, it means that useful economies can be made at all these points. Here are chances for executives to demonstrate their organizing genius and their *constructive* cost-cutting ability.

Postponed

Owing to the crisis the *Business Efficiency Exhibition* (scheduled for Sept. 26 — Oct. 6) is postponed indefinitely

This information came through to us after the bulk of pages for this issue had gone to press.

Will readers therefore please ignore any reference that has been made to the Exhibition, either in the editorial Equipment Survey pages or in our advertisers' announcements, as of course it was too late to remove these references from the text

Thank you
EDITOR

Explodes Long-Cherished Fallacies

OTHER DISCOVERIES being made include the realization that certain long-cherished business beliefs are pure fallacies.

Prominent among these is the belief that certain businesses can be successfully carried on only from traditionally fixed locations.

One concern, with a consultancy type of business, formerly carried on in London's West-Central area, traditional home of this kind of enterprise, has migrated into London's outer industrial ring. An unheard of move. The first of its kind, in fact.

Report so far records: better air; quietude; more space at much lower cost; no labour difficulty; no hitch to transacting business with clients.

Another firm, with a factory in outer London, ran a small West End office. Owing to the crisis, the West End office has been closed and the staff transferred to the factory. Commenting on the move, the managing director said: "I do not know why we ever had a London office. We shall certainly not re-open it. It is just as convenient to do business from the factory."

In fact, this is the opinion coming in from many executives who have migrated: "It is just as convenient to do business from here."

New Exodus From Big City Centres

THIS ENFORCED experience, therefore, might quite easily mean the beginning of a gradual flight of offices from crowded city centres. It might represent the fortuitous explosion of a fallacy that has done so much to create the street and traffic congestion of which we now complain.

THE TREND OF TRADE

Marketing—Advertising—Selling

TAKE ADVANTAGE of these BOOM

AT the moment of writing the danger of a major European war clouds the entire situation. Fortunately the threat of a railway strike is at an end. Meantime business must wait the issue as calmly as possible.

What a prolonged crisis or war may do to business no man can tell. Just at this moment, however, business rapidly approaches a peak.

Our distorted boom shows many of the characteristics of the more normal cyclical boom. There are a few signs of the usual holiday recession. The output of such diverse industries as cotton, motor-cars, furniture and steel, have suffered little from the usual summer lull.

Even that temporary lull among industries, radio, seems to have taken a new lease of life, to judge by the vigour of the makers' advertising and selling plans for Radiolympia.

Records Broken in Many Directions

NEVER were the general effects of the so-called spiral to success more exhilaratingly exhibited. Not merely unemployment but retail sales, steel output, total building work, bank clearings, continue to break records. The staple industries are benefiting too. Already Lancashire cotton mills are employing 100,000 more workers than a year ago. Even the coal industry is employing 15,000 more in its slack season. If the constructional and armament industries have set the pace for 12 months past, the consumer industries are now broadening the spiral remarkably.

The paradox of a super-boom accompanied by falling commodity prices and the falling cost of living remains; *The Economist's* complete commodity index continues to fall; both British and American primary product prices have also failed to firm up.

One cause for this is the growing wheat surplus; another the failure of American business to gain sufficient confidence for buying far ahead. War or the threat of it would change all this overnight.

Retail Prices Fail to Rise

THE current situation, so deadly for the East and for some of our Colonies, has something to do with the

OPPORTUNITIES NOW

Beneath the stress of war preparations and present uncertainties responsible executives should push forward with plans quietly. . . .

At all costs staff morale at home and abroad must be kept up. . . .

The time has come to buy such equipment and to set going such training as will enable a concern to meet a labour shortage in the near future. . . .

Writes CECIL CHISHOLM, M.A.,
Business Economist

fall of three points in the cost of living under last year's level. This failure of retail prices to rise in the face of the extraordinary prosperity of the country is almost unparalleled. Indeed, the causes cited scarcely seem to explain the position. It seems certain that nervousness among the middle classes at home must be playing a part.

Even more puzzling are the extraordinary black spots in retail sales up and down the country. Not only are Bond Street and Savile Row near-depressed areas, but luxuries like jewellery are not selling easily in such a centre of prosperity as Birmingham.

Some of the popular West End stores catering for the £500-a-year family are still suffering. Yet other department stores in Bristol, Leeds, Birmingham itself, and in Glasgow, are selling exceptional quantities of the more expensive as well as cheap lines easily in every department. Apparently the wealthier classes in some provincial centres are much more sensitive to stock exchange jitters than others.

Better Business with the Empire

WITH exports up by 7.6 per cent and imports up 5.9 per cent, July overseas figures give no cause for complaint. The interesting point about our overseas trade is the many changes

in direction. Roughly speaking, we are doing a little more business with the Empire than twelve months ago (+3 per cent); our business with Europe is about the same (-0.3 per cent), with significant changes in direction, while our trade with U.S.A. and South America is increasing rapidly (+18 per cent).

Some of the individual changes are significant. During the past quarter Eire took 15.4 per cent more goods from us than a year ago, while New Zealand increased her orders by 6.3 per cent and the West Indies by 13.3 per cent. In July 49.4 per cent of all our exports went to the Empire.

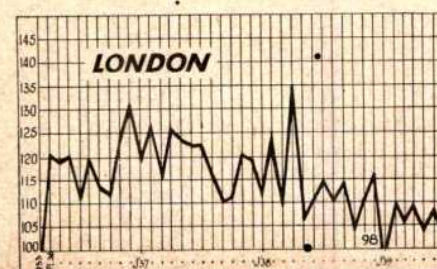
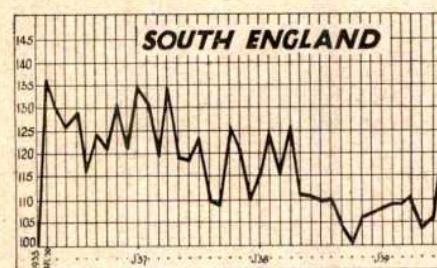
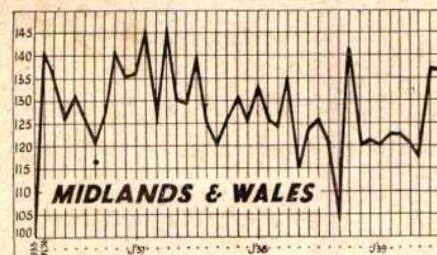
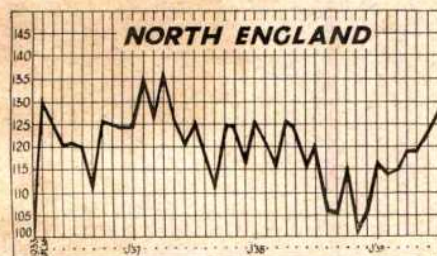
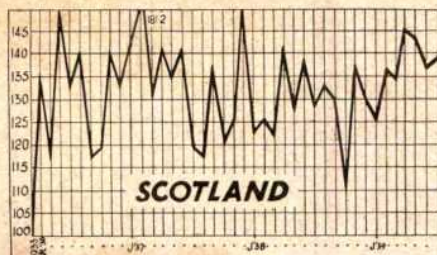
In Europe we are doing more business with all the Scandinavian countries (Denmark's orders up by no less than 35.8 per cent), with Poland (+20.9 per cent), with Switzerland (+34.2 per cent). On the other hand, we lost 68.3 per cent of our Spanish business, 60.6 per cent of our old business from Czechoslovakia and 25 per cent of our Italian business. Altogether 31.9 per cent of our exports went to Europe as compared with 35.7 per cent in 1933.

More Exports to America

OUTSIDE Europe our biggest success is due to the new Anglo-American Trade Treaty. This enabled us to increase our exports to America

REGIONAL ACTIVITY

Study these graphs. They show the level of business activity in every area of the U.K. and provide a guide to the trend of business from a long-term viewpoint.



by no less than 75 per cent, or upwards of £7,000,000. In S. America Uruguay bought 23.4 per cent more from us, Bolivia 37.3, Argentina 9.4 per cent. In all, however, our trade with foreign countries outside Europe supplied only 18.7 per cent of our export orders, as compared with 23.1 per cent in 1929. Clearly we are manufacturing a little more cheaply to secure such definite

improvement in trade in South America. For which we must thank the failure of prices to rise in this country.

Only this failure of prices to rise is also holding back any heavy increase in our adverse balance. So soon as there is any serious price rise here, our resulting inability to export will make it difficult to avoid a heavy adverse

EMPLOYMENT INDICATOR TO TRADE ACTIVITY



balance through our imports of raw materials for armament purposes.

The Problem of Training Labour

THE engineering industries are already facing an intensive shortage of labour. Unions have agreed to dilu-

tion as soon as the available skilled labour is entirely occupied. With unemployment running around 2.5 per cent in many engineering districts, that point cannot be far distant. Only ingenuity in training new labour and in improving technical methods can avoid serious price rises in this field. Even the ingenuity of a MacIntock will be

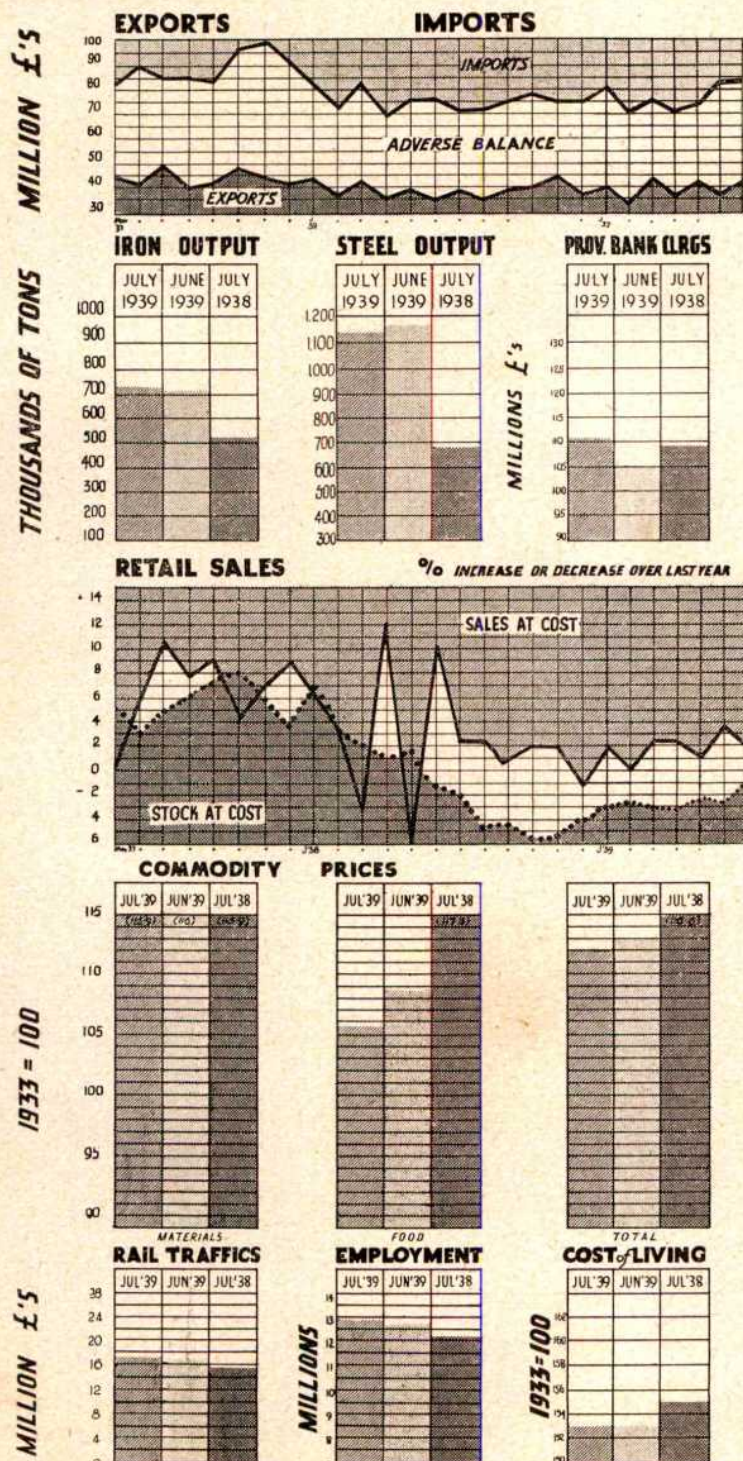
hard taxed to keep down aircraft costs if wages soar.

Meantime, America's industrial situation steadily improves. Were fears of a European crisis removed, America might come into the market for raw materials on a big scale. Unfortunately these fears increase. As a result improved steel output, the very bright outlook for the motor industry, considerable building activity—all fail to bring America into the commodity markets on a sufficient scale to start prices rising.

In most European countries trade is again on the upgrade. In the totalitarian states shortage of labour and materials alone set limits to production. But the Scandinavian countries are absorbing their small numbers of unemployed with almost equal ability.

GUIDING FACTORS IN THE TREND—

All comparisons are with similar month in last and previous month in this year



Executives Must Make Plans Ahead

UNDER the stress of war preparations and uncertainties, the responsible executive can but push forward with his plans quietly. At all costs he must keep up the morale of his staff both at home and abroad.

Whatever the future may hold, the moment has come for the average concern to buy such equipment and to set going such training as will enable it to meet a labour shortage in the near future.

Apart from this, the first necessity is to prevent costs from rising, as they always tend to do under boom conditions. As it happens, this is a national duty as well as a business necessity.

To-day The Man Counts More than the Machine

LONG training and experience are necessary before a man can be trusted to take control of these intricate machines. Their skilled operators are craftsmen filling a far more important and dignified place in industry than did even the best hand worker in olden times." So affirm the top men of Dagenham's Ford Motor Co., Ltd., referring to operation of the thousands of modern, correct-to-a-millionth-of-an-inch automatic machines that comprise the Ford production plant.

Such a statement confirms the emphasis, constantly being laid by this paper, on the need in all firms for a personnel management policy that does everything possible to promote the happiness and comfort of workpeople, to preserve their health, to develop their loyalty to the firm and so to hold them to their jobs.

Lord Perry, in the early Dagenham days, said personally to us: "Men are more valuable than machines. A new machine will function perfectly within an hour, but it takes years to train the operator to whom we can trust that machine."

Plans and Ideas from Other Executives

Wider Guarantee As Sales-Building Point

IT IS FUNDAMENTAL, of course, that a mechanical product sold to the public needs a backing of Service from the manufacturer and the dealer.

Too often, however, manufacturers are arbitrary in the definition of their responsibility towards the product they sell. Where a guarantee is given, for example, the manufacturer usually states his conditions, sets his responsibility at three months, six months, a year or whatever it is, and that's that. Dealers and public can take it or leave it.

Yet this is not really an equitable arrangement, or even the best of business propositions, since it is usually to the dealer that users of guaranteed products resort in cases of trouble. This seems to suggest, therefore, that the practical experience of dealers might well be taken into consideration by the manufacturer when framing the conditions and period of the guarantee.

This intelligent policy has been followed by E. K. Cole & Co., Ltd., the radio manufacturers. By means of enquiry and discussion among their leading dealers Ekco have finally evolved a guarantee that is being welcomed by the dealers as providing for their best interests.

The arrangement is that all Ekco products carry the manufacturer's guarantee for 12 months, during which period any faulty parts will be replaced free, and, during the first three months, even labour charges for fitting the new parts will be free.

This new guarantee will be prominently advertised. Manufacturer and dealers believe it will prove a strong sales-building point for the coming season.

Staff Makes Those "Plus" Sales

BOANS, LTD., is one of the best-known department stores in Perth, Western Australia. Their women's hosiery buyer recently searched the continent for a line of Australian-made full-fashioned silk hose that for quality and price could be starred as a really outstanding bargain.

He found his top-liner, gave it a brand name and backed it fully with appropriate publicity.

But this buyer went one step further. Realizing that in the large staff of the store he had, in every woman member, a potential advertising source of considerable influence, he persuaded as many women employees as possible to buy and wear the new stockings. They were aided, of course, by a liberal house discount.

The store's house magazine devoted half a column to backing up the

buyer's idea, and a real enthusiasm for this branded line was created throughout the staff. This enthusiasm travelled outside to parents, relatives, friends.

So far, we understand, this line has made a record sales *début*.

Proves once again that, given a real

'BUSINESS' Annual Survey of ADMINISTRATIVE EQUIPMENT for Factory, Sales & General Offices

See page 21

value-for-money proposition, your staff can help sales in more ways than just selling over the counter.

Package Offers Sales-Boost Possibilities

"AS YOU LIKE it . . . one to spoon, one to pour." This current advertisement of Heinz Salad Cream, featuring two types of container for the same product, is yet another example of the sales-building power of the appropriately designed package.

A few seasons ago one of the great chocolate houses featured in their advertising: "When you buy chocolates you buy *chocolates*." They emphasized that cheapness and lack of elaboration in the box enabled all the value to be put into the chocolates. It proved a good sales point.

A meat extract manufacturer hinged

one national advertising campaign on a new container with a neck wide enough to take a spoon: for the housewife and the cook a vast improvement on the narrow-neck jar that for years had been the standard container for this product.

There are still endless ways in which containers can be improved to give greater ease and convenience in use, to indulge the whims of users, to provide better appearance, to pack more easily for transport, to fit more conveniently on shelves, to be lighter, stronger, cheaper to produce without jeopardizing utility, to meet new needs such as special shapes, sizes or material.

A New Line At Low Cost

AND SPEAKING of containers brings to mind a plan adopted by United Glass Bottle Manufacturers, Ltd., to secure increased output by introducing a new line. "United" have introduced glass flower pots which they are selling to, and through, horticulturalists.

Selling points appealing to horticulturalists are that the glass containers give better results than other types of flower pots, that plants need less watering, that breakages are less, and that they increase the sale of potted plants which the public previously avoided because of the unsightliness of the old-time flower pots.

Selling point which appeals to the public is that the amber-coloured glass pots are an ornament in the home and so permit the wider use of potted plants in the living rooms of houses.

This introduction of U.G.B., Ltd., is a good example of finding a new and additional product for the manufacture of which plant, materials and staff already exist.

A Mobile Bench Idea

BY INTRODUCING power driven assembly lines and mechanical handling devices potential production of axle units has been doubled by Leyland Motors, Ltd., in factory expansion plan. One interesting arrangement is a series of moveable benches for supporting axles.

Unladen, the benches can be pushed about anywhere, on castor wheels. But as soon as one is loaded the bench is directed on to a mono-rail, into which two special little wheels on the bench engage. Thereafter the bench proceeds along the mono-track until work on the axle is completed and it is picked up by a chain conveyer and transported to the point of assembly.



This is a high-power pocket magnifier incorporating a battery-operated electric light for illuminating the object under examination.

In manufacturing, buying and selling it is often advantageous to submit some object to an exceptionally close scrutiny. Available light may be poor, and position of the object an awkward one. That is where this Ultra Lens is valuable. No time is wasted in focusing. Simply lay the instrument on the article, turn a switch, and get a powerful magnification in a brilliantly lighted field.

Obtainable from Richard Bock, Finsbury Ct., Finsbury Pavement, London, E.C.2.

Small Campaigns Launched Both These

But "Male Dull-headedness" Nearly Wrecked This Idea, says



MRS. H. KINGSLEY

Managing Director, Babydry, Ltd.

In an interview with

FRANK POULTON

lose: tremendously absorbent, held together with a light cotton net as foundation for the essential pin, impregnated with talcum for additional softness and with a light acid neutralizing element, for obvious reasons. By an ingenious process, too, the outside layer of the cellulose was waterproofed.

Extensive trial finally showed this to be the perfected napkin, so Mrs. Kingsley brought her idea to England, to which country her husband was called for business reasons unconnected with Babydry.

Manufacture and selling had to be put on a commercial footing, with a capital of £1,000.

Before launching these activities the new product had, of course, to be identified by a brand name. The designation "Babydry" was finally selected as being both simple and reasonably descriptive, and a company of that name was registered, with offices in Wigmore Street, London's West End.

First Market Try-out at Woman's Fair

At this point Mrs. Kingsley, rightly or wrongly, decided to try out the market potentialities of Babydry in Britain before actually laying the foundation for its manufacture. She had, back in Belgium, a very small "factory" in which a few workers were making up the product by hand.

With a few of these hand-made specimens she therefore stocked a very modest stall at the Women's Fair which was then just opening at Olympia. Careful experiment, even in hand manufacture, had proved that the Babydry napkins could be offered at as low a price as one penny each. At this attractive selling price, therefore, the new products on the stand were put before the public.

Success was immediate. Within a few hours the initial stock was sold out; the stall had to be closed, and Mrs. Kingsley hurried back to Belgium, where she herself worked continuously

for a night and a day assisting the handworkers to make a further supply.

Back again at the Women's Fair the stall was reopened, with equally gratifying results. The stock was sold, and letters began to come in from all over the country, ordering repeat supplies.

Here, it might be explained, Mrs. Kingsley fully realized the difficulties that might arise by entering an exhibition without the backing of adequate stocks. But, for her purpose, the Woman's Fair was vitally important from the initial marketing point of view. It was an opportunity not to be missed, so she took space with whatever resources she had available.

Big-scale manufacture, however, was obviously essential, and what better proof could be given of the product's potentialities than this rapid sell-out at the Exhibition and this spate of repeat orders received through the mail?

Full of optimism, therefore, Mrs. Kingsley sought a British firm that would undertake manufacture of the Babydry products.

Sixty-one Tries to Find a Manufacturer!

Here, however, she met her first serious rebuff. One after another the British manufacturers turned down the proposition. Some that were in the cellulose business refused on account of abnormal pressure of work on Government contracts for explosives. But many more exhibited, as Mrs. Kingsley somewhat tartly put it "typical male dull-headedness," by refusing the business as "having no commercial future."

No less than sixty firms refused Mrs. Kingsley's proposition. With most remarkable persistence, however, she approached yet another concern, the sixty-first. It was a personal approach, to a director of a small cellulose-producing firm, but even here, to quote again her own words: "this gentleman was only less obdurate than the others." Anyway, this firm finally agreed to manufacture, provided Mrs. Kingsley would pay for the special machine that it was necessary to install.

The upshot was that Mrs. Kingsley did pay for it, and manufacture started.

There was No Such Thing as Market Planning

There were no elaborate marketing plans. Research, for example, was considered unnecessary. The work-saving appeal to every mother in the land was taken as established fact.

As an introduction to distribution, however, a tentative advertisement was taken in a trade paper, though this was by no means the beginning of the sales campaign which was to be planned later. National consumer advertising was not used. Mrs. Kingsley believed that such was the news value, to

TWO years ago a Belgian woman had an idea for a new product. She had seen the drudgery of housework gradually reduced by one invention after another, and as a woman she appreciated these things. As a mother, however, practical experience opened her eyes to the fact that no modern idea had yet come forward to lighten that almost continuous, and certainly bothersome, job of washing baby's napkins.

Here, argued Mrs. Kingsley, modern science and ingenuity can surely lend a hand. An ever-present and worldwide market awaits any real solution that present-day knowledge can evolve.

Mrs. Kingsley therefore started with the aim, not of finding some new and less arduous way of washing the ordinary kind of "nappies" but to discover a garment of an entirely different nature that would banish the need for washing and drying and airing; something that could be disposed of altogether after being once used.

In the United States Mrs. Kingsley had seen a successful business built up on a specialized laundering service for these essential baby requisites, but she held that such a service, labour-saving as it was, was merely compromise. After many months of experiment and consultation with nurses and doctors, she therefore devised a napkin of cellu-

Products into Big Markets in 2 Years

women, of Babydry products that "editorial" would best serve her purpose as an introduction.

Accordingly she gave a cocktail party at a well-known London hotel and invited the editors of women's papers and the women's page editors of the national and provincial, and trade papers. The result, in stimulating demand, proved highly satisfactory. The cost, about £15, was considerably less than a printed appeal to the potential markets.

The next steps were in reverse of the usual order of things when launching a new product. A sales force was engaged before any work was done on the wide advertising campaign that has now been planned to start this month. Advertisements for salesmen were inserted in a newspaper, and from the applicants a force of fifteen was gradually built up. The home and other counties nearer London were the first to be covered by the new recruits, mainly because the production plans had not yet been developed sufficiently to cope with the demands expected from a wider field.

As organization progressed, additions were made to the field force. These were engaged to work the districts with which they were familiar: a Leeds man to a Yorkshire territory; a Coventry man to ground in Warwickshire, and so on. None raised any demur at the initial lack of national advertisement backing.

Class Magazine Advertising, Plus Direct Mail

The new campaign was originally planned for insertion in the class monthly magazines with an appeal to women; but here another difficulty arose. It was discovered, when the campaign was due to start, that, owing to heavy space reservations, the Babydry promotion matter would be lucky, in some instances, if it got even into the Christmas numbers.

The argument in the first place had been heavily in favour of the monthlies, on the principle that they commanded a greater and more permanent hold upon the reader than weekly or daily publications. Now, however, Mrs. Kingsley is persuaded of the pulling power also of the weeklies.

The media chosen are trade papers and weekly magazines covering all classes of readers with a few specialized magazines that have the direct interest of parents.

This campaign is to be reinforced by a direct mail approach to fifty thousand doctors, nurses and welfare workers.

To meet the requirements of an expanding market new and more attractive cartons are under consideration, display cards and other appropriate matter with counter appeal, and de-

scriptive literature are in the hands of artists and printers, and, as one last proof of an inventor's faith, arrangements are being made to establish offices in Paris, Copenhagen and other European countries. World patent rights for the Babydry product have been secured at a cost of £600. "If," says Madame, "our sales supply the needs of only two per cent of Britain's babies all our costs are taken care of:

if we supply four per cent we make a handsome profit; if we supply five per cent we buy a Rolls Royce!" And previous to this enterprise Madame was engaged in making a letter and document-copying apparatus!

A point that might interest some of our readers: Mrs. Kingsley's husband, who has his own business, is the grandson of Kingsley of "The Water Babies" fame.

A Winner Because it could Take the Shiver out of Summer

An interview with WINDOUR LTD.

MANY new businesses have been started, and many old-established firms have added to their turnover by an ingenuity and "marketing sense" that have enabled them to cash in on a new fashion or habit.

Many of the products that have been the outcome of such enterprise have been intrinsically simple, and their appearance on the market has provoked people to soliloquize after the good old "Why didn't I think of that?" manner.

The tremendous growth of sun bathing, for example, saw a logical gesture on the part of manufacturers who offered a spate of suitable and attractive habiliment for the purpose—so long as the weather was kind to the wearers.

It has taken until quite recently, however, for there to be developed any adjunct to sun bathing that caters at all for the frequent rigours instead of the occasional clemency of English summer weather. Even in our most favoured resorts, and throughout a great deal of the sunniest weather, an uncomfortable and chilly wind prevails, a circumstance that the designers of

glamorous undress had been powerless to combat.

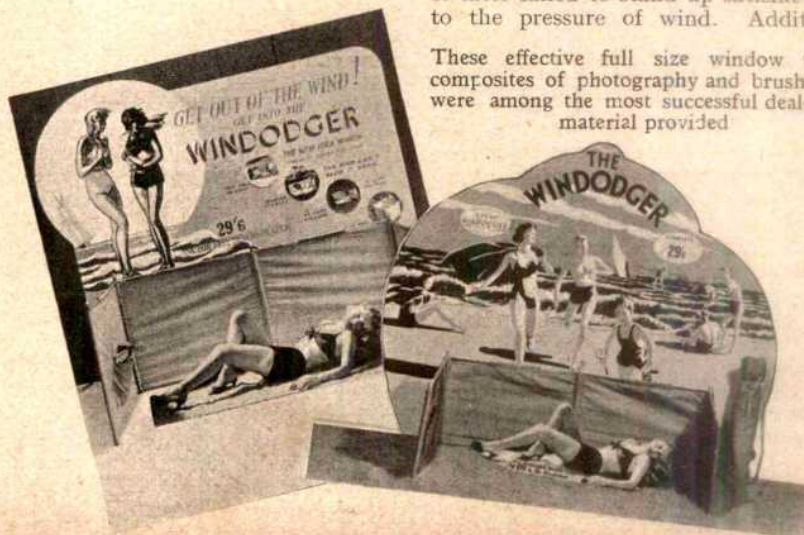
It was through observing so much intrepid shivering in the sun that Mr. Morton, one of the directors, started on the track of something to shield the lightly clad lovelies and other bathers and campers from the cold winds.

Simplicity and Portability Were Essential Factors

In short, he conceived a "wind dodger": something that was not only effective for its primary purpose but which was also easily portable and not likely to add any considerable burden to luggage taken on holiday or carried by car or even motor-cycle. Anything in the nature of a tent was thus ruled out, not only because tents of many types already existed but because they fell far short in the requirements of small compass, portability and ease of putting up, and completely prevented the users from enjoying the benefit of the sun.

Experiments were made with many other kinds of shelters, but all sooner or later failed to stand up satisfactorily to the pressure of wind. Additional

These effective full size window trims, composites of photography and brushwork, were among the most successful dealer-aid material provided



anchorage by means of guy ropes was an inconvenient complication, and anyway it is next to impossible to make small pegs hold in sand or shingle.

Finally, however, a more scientific idea based on an aero-dynamic principle was employed whereby the pressure of the wind itself was utilized to increase the rigidity of the structure. This method was developed until, ultimately, it was so simple, yet so efficacious, that it is not likely to be superseded.

In due course the perfected model "wind dodger" was taken to Birchington, on the Kent coast, and erected on the beach.

The interest created there among the general public by the obvious snugness and trimness of this new-type shelter was so great that Mr. Morton was convinced he had produced something of real worth.

A company was formed; the product was given the brand name "Windodger," and patent rights were secured in the leading countries of the world.

When manufacturing arrangements had been completed, the next step was to introduce "Windodger" to the public.

Ad. Campaign Opened Up With Five "Smalls"

The company was a small one. There were not sufficient resources to open up on a nation-wide scale. And, anyway, Mr. Morton preferred to try out his markets gently.

The first move, therefore, was a series of five "small" ads. in a London evening newspaper. Results from these simple insertions far exceeded expectations; the response they pulled from sports goods dealers, holiday-wear outfitters and the general public fully taxed the manufacturing capacity as it then was.

This year production has been increased and a much wider public was aimed at by larger display advertisements in the weekly magazine, *Picture Post*, and the monthly magazine, *Lilliput*. These papers were considered to give the most effective coverage possible of the right class of prospect for the funds available.

This choice of media proved well founded. As Mr. Morton put it: The response was instantaneous and was well maintained. Not only did a very satisfactory volume of grade "A" inquiries come in from all over the British Isles but within a few weeks from many other parts of the world as well.

Stockists were appointed in all leading towns; but, as a result of the first advertisements, complaints were received from the public in many of the smaller towns that they were unable to obtain Windodgers in their own localities.

To overcome this difficulty a coupon was incorporated in the display advertisements. This invited the public to send in to head office the names of local dealers and was a neat and inexpensive device for locating new dealers who could be contacted at once, for the

employment of travellers in numbers sufficient to cover the whole country was not part of the initial sales campaign.

Dealers appreciated the move and received it warmly. Friendly relations were quickly established with many new stockists, and the resulting benefits were satisfactory and mutual. In cases where individual mail orders sought direct purchase from the Oxford Street address, dealers in the district from which the orders came were informed and offered the opportunity of stocking the "Windodger" on advantageous terms.

Though the public's response to the publicity campaign had been extremely satisfactory, still further assistance has been given to stockists by a wide variety of well-designed show-cards and cut-outs. These range from small-size counter cards to full-scale window displays.

Dealers in certain selected seaside towns were also given every assistance in the matter of local newspaper advertising. A number of line blocks were made available in various sizes, and interested dealers were supplied with "pulls." The most effective local advertising of all, however, was the demonstration of the product itself on the beaches.

By its very nature the "Windodger"

thus enjoyed the inestimable advantage of being demonstrated at its best right at the point where it would be used and where the biggest crowds of potential buyers were already gathered. And this at practically no cost.

It is given to very few new products to enjoy such a fortunate circumstance. To find suitable locations for "dems." and then to be able to persuade a sufficient attendance of prospective buyers is all too often one of the sales manager's most difficult and expensive tasks.

One of the points about a produce like the Windodger is of course that it is seasonal. In England, from late autumn till early the following summer, the season for it is practically dead.

To offset this, however, the company is establishing agencies in countries throughout the world where the climates permit much longer, and in many cases "opposite," seasons of utility. Thus an all-the-year round trade will be built up.

In two short years this small company has already built a business from nothing to something that looks like becoming the proverbial household word. The time may not be far distant when Windodgers will be as familiar everywhere, and as readily available to holiday-makers, as the ubiquitous deck-chair.

Raised Sales Over 30% in 3 Months

THE selling of different types of products in two or three distinct markets leads to difficulties in co-ordinating advertising and sales effort. Most manufacturers who have multiple market problems will agree with this statement and will be interested in the way one firm has solved such troubles.

The company concerned sold products to (a) the general public, (b) the farmer and (c) other manufacturers. Each salesman handled all lines. Advertising was combined, as much as possible, for all three types of products, as the firm could not afford to launch special advertising campaigns for each line.

As is natural, each salesman sold heavily the particular line which he found could be handled most easily. For example, a man who got along well with farmers, was interested in farming, and so on, concentrated on goods selling to farmers. The result was, of course, that the other two markets in his territory suffered. Similarly, other men interested in the business or the general consumer products developed one line to the exclusion of the others.

Recently the firm decided that distribution and sales of their products was so unequal in the various territories that drastic measures must be taken to correct the fault. But before any plan could be made really effective it was felt that some sort of co-ordinating advertising scheme must be devised.

With this idea in mind a radio campaign was planned. The decision was based on the conclusion that radio programmes at least are listened to by all classes of people—farmers, business and professional men and the general public.

To back up this scheme the firm arranged for a temporary change-over of territories between salesmen. A conference of the men was called, and the position was outlined. Their approval and co-operation was obtained. Men who were "strong" on selling to farmers were switched to territories "weak" in this respect, and so on.

Wherever this temporary change took place, the salesman concerned sent explanatory letters to all his accounts. That smoothed the path for the incoming man. He had little more to do than make a formal call on existing customers and thus had most of his time free for the drive on the market in which he was most successful.

Meanwhile the radio campaign was having its effect. Many direct sales resulted from the programmes. In a number of instances the programmes led to opening up valuable new retailer accounts as well as getting a good response from farmers and from business men.

In the three months devoted to the drive sales in total increased by more than 30 per cent, and in most districts now distribution of the various products is satisfactory.

BUSINESS

Annual Survey

OF

Administrative Equipment

FOR

FACTORY, SALES & GENERAL OFFICES

IN this survey, which we provide each year, we are not influenced by the fact that a trade exhibition of business equipment may or may not be held. If there is such an exhibition, as will be the case later on this month at Olympia, London, then this Survey can be used by readers as a valuable "pre-view," a guide from which to note particularly any equipment or system of which a demonstration is specially wanted.

That, of course, is where the printed pages of the magazine do fall somewhat short. They can give descriptions and illustrations, but they *cannot* give practical demonstrations.

Every Year Progress Reaches New High Standard

However, the magazine has the advantage another way. The descriptions given in these pages last a full year, and can be turned to for reference at any moment during that time. The details remain current and accurate until the following September brings along its revision.

And mention of this revision reminds us of what a tremendous

By THE EDITORS

amount of revision is required in order to bring these annual surveys up to date.

It is only by having to get right down to the detail of writing these changes that one can really appreciate what great progress the equipment and systems manufacturers make during the course of a single year.

In hardly a single case is it ever possible to use again the description of a product written for the previous year's survey. The few exceptions are in the cases of such equipment as steel shelving. Steel shelving does not alter much in constructional detail, nor do filing-trays, waste-paper bins, and so on.

But this is by no means the case with the more functional equipment. Here the story is one of continuous improvement. Every machine and system is advanced to a higher standard in the matter of increased output or greater ease of operation or lower

cost of running or increased function or combinations of some or all of these things.

Anything more than a cursory glance over the following pages will establish this fact beyond question.

It is because of this constant and vitally important improvement in so many things which go to make up a business's "anatomy" that we urge executives to study this survey now and to refer to it frequently during the ensuing twelve months.

We do not like to make use of that dreadfully trite cliché: "You can't afford *not* to" do this, but that literally is a fact, if you want the best equipment in your business, if you want to have the highest possible output of work at the lowest possible unit cost—and into the bargain have the contentment and wellbeing of your staff increased.

Use 'Business' Now, And All The Year

We select September as the month in which to publish the Survey because September really starts business's New Year.

Summer holidays are over. The exhaustion of toiling round golf courses, over mountains, or along endless miles of open road have toned up the blood of everybody, from lift-boy to chairman. Physically and temperamentally everyone is all set for a record season ahead.

Such preparedness, therefore, must naturally include an examination into improved means by which a record season can be ensured.

But while we do gather together in September details of *all* the chief modern appliances, we should like to stress here the fact that every month



With new and still better equipment doing more and more of the 'collar work', business, for the personnel, assumes a new aspect, symbolized in this modern style combining Simplicity, Comfort, Convenience, Brightness and Hygiene.

This particular executive office was fitted out by Cox & Co., Ltd., of Watford

throughout the year BUSINESS publishes selected examples of how this modern equipment is applied in practice and how it does help firms to raise their standards of efficiency.

These selected examples are well worth studying, as they are actual reports from the seat of operations. They are quite free from speculation or mere theory.

For example, in January we published the description, from a nationally known firm, of a complete reorganization of its factory. We showed the "invalid" conditions that existed before the operation began; we described the changes made, and finally listed the tremendous improvements that resulted.

This works reorganization was, in fact, such a comprehensive example of what can be done by modern methods that the company concerned gave the description as an address at the International Management Congress held in Washington, U.S.A.

In contrast to a big-scale administration article of that kind we published, in February, some really unique information on the control

of salesmen's cars. The Transport Superintendent of Imperial Chemical Industries gave a special interview to our Transport Editor, in which he explained exactly the efficient plan of control and costing that, by careful study, had been evolved by this great concern.

In March the head of a famous motor-car distributing house told how, by a flexible policy of management, he had increased his firm's profits at a time when his trade was suffering from doldrums and many similar concerns were announcing fallen profits.

Business Efficiency Exhibition *Postponed*

Please read the notice
displayed at the foot
of Page 13

In April a consultant explained how the *small* business could use modern statistical control.

In May a famous radio firm outlined their system of planning ahead to meet imminent market changes.

In the same issue an office management expert gave a detailed explanation of the many ways in which office records can be preserved against loss during war. By utilizing modern equipment it was shown how voluminous records can be copied into about a hundredth part of their bulk for safe storage.

There were, of course, dozens more articles as well, all as various in character and as useful in substance, but we cite the above just to indicate that BUSINESS is always a magazine of modern method and equipment.

That word "always" has a literal meaning. The Publicity Manager of a motor-car firm told us recently that, when designing his catalogue of 1940 models, he made use of an idea that he remembered seeing, *eleven years ago*, in BUSINESS. We have not room in this issue to include that idea, but we hope to publish it in October.

Use This Classified

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ADDRESSALL MACHINE CO., LTD.,
266, High Holborn, London, W.C.1.

"ADDRESSALL - INDEXOGRAPH" signifies the development of a mechanical operation into a system of data collection and reproduction.

The system is based on two units working in conjunction. First, the Indexograph. This is a combined Index Card and Reproducing Section, printed to suit the particular user. In addition to performing all the functions of ordinary record cards, Indexographs can be reproduced at high speeds with guaranteed accuracy whenever needed. Selection to suit requirements of the user is made easy by different colours of card, punched holes or notches.

Reproduction is by means of a second unit, the Addressall Machine, in its various sizes and ranges. This can be operated by a junior, and enables users of the system to reproduce large numbers of addresses, etc., from the Indexographs at will. The machine will reproduce consecutively, skip, duplicate, triplicate, etc., automatically as desired.

Indexographs are prepared by type-writing or handwriting in the user's own office, no special machinery being needed. The system is, therefore, self-contained.

ADDRESSOGRAPH-MULTIGRAPH LTD., 20, Kingsway, London, W.C.2.

MODEL 40 "MULTIGRAPH" DUPLICATOR: one of the most versatile duplicators on the market. Apart from reproducing typewritten matter, this machine will duplicate handwriting, pen and brush

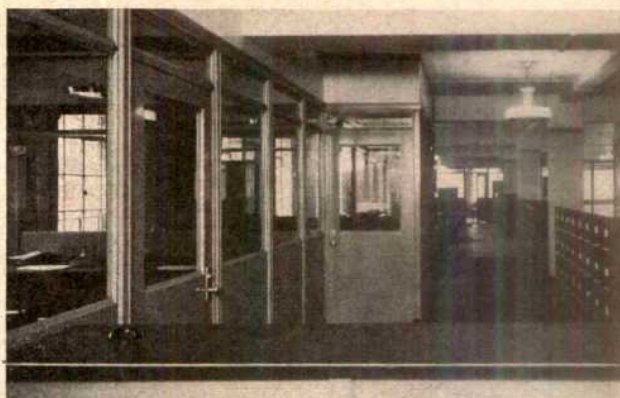
drawings, ruled forms, light-face type copy, line illustrations, etc., on paper varying in size from 3 in. by 5 in. to 9½ in. by 13 in. Three different duplicating media are available for use with the "Multigraph" Duplicator and the quality of work obtained is extremely high.

NEW MODEL 900 AUTOELECTRIC ADDRESSING MACHINE: is an old friend in new guise, being an improved model of one of the most popular "Addressograph" Machines. The model embodies new features, including flexible rack lister, simplified adjustment of platen pressure, etc., and has a modern stand with a smart black morocco finish. Business men interested in low-priced electrically operated Addressing Machines will be able to exam-

ine this model at the Exhibition.

THE NEW VISIBLE FILING INDEX SYSTEM: is important because it provides a link between the Factory and the Sales Department. It combines in one unit an efficient customer-filing index, an order control system plus the "Addressograph" Addressing Machine—the means of mechanically writing all the necessary data on to consignment notes, invoices, labels, etc., etc. Many firms, large and small, are already using the system for handling their orders and speeding up dispatch, and a Bedaux test has proved that its output is 50 per cent greater than that of any other similar system. Addressograph-Multigraph, Ltd., have a good phrase to describe it: "Your Customers at your Finger-tips."

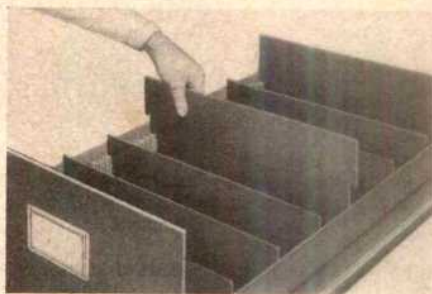
Art Metal Partitioning is not only of fine appearance but is easily moveable and adjustable: ideal factors when inexpensive changes of office lay-out are needed



ART METAL CONSTRUCTION COMPANY, 199-203, Buckingham Palace Road, London, S.W.1.

SHELVING, BINS AND CUPBOARDS: for every storage requirement made from stock parts. Shelves adjustable every 1 in. in height.

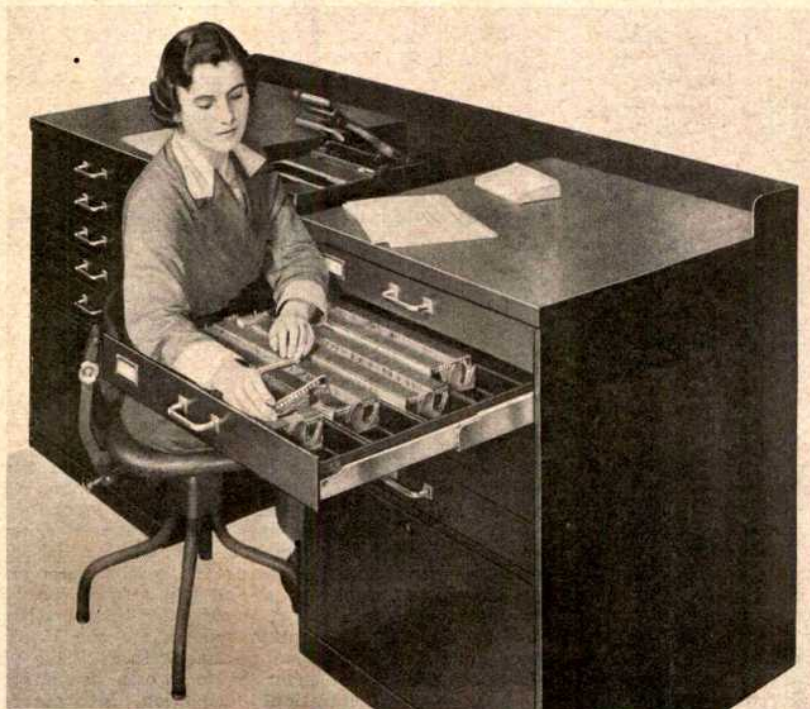
SECTIONAL PARTITIONS: for dividing up floor space so that alterations can be made when necessary. They are



Art Metal's new "space-a-file" drawer

available ceiling or cornice height and incorporate effective sound-insulation, watertight base, and provide for concealed wiring for light, power and telephones. Also non-insulated partitions for factory use.

FILING CABINETS: for all standard sizes of paper and card records, with or



Addressograph-Multigraph's new Visible Index Filing System

without automatic locking. New features include "cradle" suspensions on certain better-grade cabinets, also quarto and foolscap drawers 11 in. deep inside with "Space-a-file" equipment, i.e., the drawer sides slotted at 1-in. intervals to take adjustable steel plates instead of the usual compressor. Five or six plates per drawer are provided. They prevent binder folders from riding up, also useful for filing negatives and samples.

DESKS AND TABLES: extremely varied range from the well-known "Air-line" executive desk downwards. Most models provide "made-to-order" convenience, the drawer sides being slotted to take adjustable partitions, stationery holders, card record equipment, etc.

PLANFILES: to take large drawings, capacities varying between 3,000-6,700. Drawings held and protected from creasing in spring-compressed pockets. Afford good fire protection, have jet-proof lid to prevent damage from hoses.

POSTINDEX VISIBLE FILES: equipment and systems for accounts, stock, sales, advertising, production, hire-purchase, and many other kinds of records. Give clear visibility, rapid reference and posting.

MACHINE-POSTINDEX: a "visible" filing system for ledger cards—simple and quick in operation. Incorporates safeguards against lost or misfiled records.

AUTOMATIC TELEPHONE & ELECTRIC CO. LTD., Strowger Works, Liverpool, 7.

COMMUNICATION SYSTEM FOR INDUSTRIAL A.R.P.: from the moment industry had to consider A.R.P. it was obvious that effective communication was vital to any defence scheme; but, it was

visual. It has keys and indicators corresponding to various extension telephone sets situated with the wardens under his control.

These telephone sets, of a robust military type suitable for use in exposed situations, are connected to the master station by a simple pair of wires and one third or earth wire.

When a warden requires to speak with the executive he depresses the signal button on his extension set. In time of emergency, much may depend upon the executive's ability to address all wardens simultaneously, a common signalling and ringing facility which enables him to do so is a very important feature of the system.

The occasion may also arise when gas-masks will have to be worn by the defence unit, thus rendering the ordinary transmitter of the telephone useless. This contingency is covered by provision of special throat-transmitter attachments which are plugged into the telephone hand-sets and which pick up and convert the larynx vibrations into speech. The clarity and volume of the speech is the same as that obtained with the normal transmitter.

Another important feature of the system is that, being independent of the mains supply, it is unaffected by mains failure and "blackouts," the possibilities of which are very strong at the time when the system will be required to give unremitting service.

The Master Station is made in two standard sizes, i.e., for 10 and 20 extensions. It is, of course, not essential that the maximum extensions capacity should be employed.

BAR-LOCK TYPEWRITER CO., Barlock Works, Nottingham.

STANDARD MODEL 20 embodies several improvements: writing line increased to 10½ in. on "correspondence" carriage; new top cover totally enclosing mechanism, thus reducing noise; tabulator redesigned; machines equipped with ten operating keys and patented stop setting



Barlock's New Standard 20

mechanism, instantaneous setting by a flick of the hand. Redesigned linespace mechanism, giving five different spacings, enabling all available writing space to be used.

PORTABLES: Barlock Portable, a general purpose machine, four-bank with 88 characters. Price is £9 9s., complete with case. The machine is extremely compact. The Bar-let No. 2 is a £6 16s. 6d. three-bank machine, one of the most economical little jobs on the market to-day.

OFFICE FURNITURE: Steel shelving, filing cabinets, tables, etc. Light steel warehouse trucks. These are exceptionally

easy to manipulate and suitable for use in crowded spaces or narrow passageways. Also heavier lifting trucks.

BELL PUNCH CO., LTD., 39, St. James's St., London, S.W.1.

+PLUS+RAPID-ADDING MACHINE, application of this well-known machine has been extended to meet specific requirements of individual users in the solution of their analysis problems. This new development is known as the . . .

MULTI-UNIT ADDING MACHINE, which, it is claimed, are revolutionary in that never before has it been possible to



A 4-Register Machine for the analysis of Sheet Steel Invoices by weight and production period: Capacity: Weight: 9,999 Tons, 19 Cwts., 3 Qrs., 27 Lbs. Sterling: £99,999 19 11 / £9,999 19 11 / £9,999 19 11d.

obtain machines giving the speed of non-listing addition built to individual specification and requirements, catering for practically every conceivable arrangement of adding registers.

Although this idea is so new, large business concerns throughout the country are reported to have taken the matter up with enthusiasm, and many highly successful installations have already been made in nationally known organizations.

Bell Punch Company is always ready to make all the necessary investigation into a firm's analysis problem without any obligation.

PORTABLE AUTOMATICKET MACHINE: portable register of the autographic type, suitable for all kinds of revenue collection and control. Issues handwritten receipt, retaining duplicate in locked container.

See announcement on page 51.

BLOCK & ANDERSON LTD., Brunsviga House, Farringdon Street, London, E.C.4.

M.1. BRUNSVIGA CALCULATING MACHINE: a crank-driven calculator for preparation of statistics for costing, accounting, laboratory and other departments.

Wide range of models covers particular purposes, all are simple to operate. Most recent for general needs is Brunsviga "15"; it has tens transmission throughout, improved method of automatic transfer of figures, one clearing-lever for whole machine, and its operation is frictionless. Large model is the "20," which has, in addition, separate thumb-wheels on product register and split carriage for accumulations. A machine for the scientific user.

Two other models are the Dupla and Twin 132. Special features of these facilitate such figure work as mechanical integration, correlation, intricate mathematical and engineering calculations.

M.2. MERCEDES ELECTRIC CALCULATORS: Model 38 enables multi-



A.R.P. Emergency telephone system: master station for 20 lines. Lower view of the handpiece shows the special throat transmitter attachment

equally obvious that standard communication systems were not qualified for A.R.P. work.

This led to the evolution of an A.R.P. Emergency Telephone System which, whilst providing the service required, is so arranged that the unusual conditions likely to prevail at emergency will not impair its efficiency.

The system, acknowledging that most A.R.P. schemes invest one executive with full authority, comprises a master station (semi-portable) located at some strategic point for the use of the responsible indi-

plicand and multiplier or dividend and divisor to be set simultaneously on same keyboard and the answer to be delivered by depressing appropriate key.

M.3. FACIT CALCULATING MACHINE: new model of an advanced principle; first machine produced on the single ten-key method of operation. Hand or electric. It is extremely rapid, has tens transmission throughout, is portable and silent.

M.4. VICTOR ADDING MACHINE: adds, subtracts and prints results. Also prints sub-totals at any position during work. Provides direct subtraction.

M.5. VICTOR DUPLEX ADDING MACHINES: electrically operated. Model 25 allows several groups of figures to be added and individual totals obtained for each group—at the same time accumulating grand total of individual group totals. Model 30, in addition, has two separate adding registers, can therefore be used as "two machines in one"—for instance, adding two groups of figures (debits and credits—receipts and expenses, etc.), obtaining two individual totals in one operation.

M.6. ORMIG SPIRIT DUPLICATING MACHINE: reproduces anything written, drawn or typed in as many as six colours at one operation. No ink, stencils or gelatine required. Ideal machine for up to 200 copies.

M.7. ORMIG SIMPLEX: for the preparation of Operations Tickets, Material Requisitions, Progress Slips, Manufacturing Cards, Routing Sheets, Cost Cards, etc., from one Ormig master. This method eliminates re-writing or re-typing any information common to different forms and makes re-checking unnecessary.

M.8. ORMIG "B" RECORD-LEDGER POSTING MACHINE: automatically posts to Ledger Cards, Statements and other records by reproducing original bookkeeping entries. Errors in posting are impossible as the original entries are typed, hand-written or tabulated as an Ormig master and proved before posting starts.

M.9. PLAN CLIP: system for filing drawings, maps, blue-prints, fabrics, etc. Great saving in floor space yet reference is easy.

M.10. LANGAPRES PORTABLE PRINTING MACHINE: for overprinting literature, letter-headings, etc. Prints direct on to made-up boxes and cartons or practically any surface or material. 27 models.

M.11. POKO POSTAGE CONTROL: several models, consisting of three-value or seven-value machines—hand or electrically driven. Poko affixes actual stamps. No agreement with Post Office is necessary.

M.13. LIGHTNING ENVELOPE OPENING MACHINE: models for incoming mail from 50 to 50,000 letters. Takes any shape or size of envelope. Automatic feed and cut-adjustment on all models.

M.14. VELOPOST ENVELOPE SEALING MACHINE: for envelopes of mixed shapes, sizes and thickness in use. Special feature is electrically heated water for the sealing. Machine is electrically operated; sealing speed of over 100 per minute.

M.15. SPEEDMAIL ENVELOPE SEALING MACHINE: for small mails, 80-100 a day. Good performance machine at low price.

BURROUGHS ADDING MACHINE, LTD., Chesham House, 136 Regent Street, London, W.1.

DESK ADDING AND BOOKKEEPING MACHINES: short-cut keyboard makes machines easy to use, ensures speed and accuracy. Portable; efficiently oper-

ated without special training; occupy less space than typewriter.

DESK ADDING MACHINES: styles with six, seven, eight or ten columns capacity, wide or narrow carriage, hand or electric operation. On subtracting models "plus" motor bar automatically

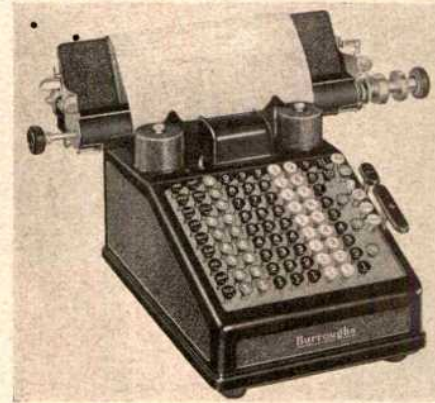


Burrough's Adding Calculator

adds the amount, "minus" bar automatically subtracts. Duplex models add two sets of figures simultaneously. All models have automatic ciphers.

DESK BOOKKEEPING MACHINES: machine-posted accounts and records for small business. All ledgers posted and balanced daily; correct statements promptly dispatched. Daily figure facts obtainable in a few minutes.

ACCOUNTING MACHINES: for all bookkeeping and statistical work. Many



Desk model Bookkeeping Machine

styles and sizes. All ledgers posted and balanced daily; accuracy of posting automatically proved as made. Additions and subtractions automatically controlled;



New Burrough's Electric Carriage Fanfold Machine

totals of postings automatically accumulated. Statements or remittance advices automatically prepared as by-products of posting operating; ready for dispatch at any time. Front-feed carriage enables detailed journal to be prepared automatically.

MULTIPLE-TOTAL MACHINES: high-speed multiple total accounting; models designed for Public Utility Billing. Others for all work necessitating automatic analysis under numerous headings, simultaneously with posting operation.

TYPEWRITER ACCOUNTING MACHINES: combine automatic features of electrically operated adding-subtracting bookkeeping machine with standard typewriter. Used for accounting work requiring description. Collating front-feed carriage permits speedy, accurate alignment of several related forms.

ALL-PURPOSE ACCOUNTING MACHINES: typewriter accounting machines, flexible, readily adaptable to many kinds of accounting records. Important features: minimum number of result keys; all totals and balances—debit or credit—computed and printed automatically by depressing a single key; negative balances printed red, with distinguishing symbol; automatic punctuation and tabulation for sterling amounts; automatic subtraction; automatic dates.

TYPEWRITER CALCULATING MACHINES: perform any calculation; print result by depression of a single key; combine multiplication with addition and subtraction; full typewriter keyboard; automatically accumulate totals.

MULTIPLE-TOTAL TYPEWRITER ACCOUNTING MACHINES: for accounting, distribution, statistical and tabulating work requiring full description. Complete several records at same time; accumulate large number of totals; tabulate direct to required column—without stopping at intervening columns.

NON-LISTING ADDING-CALCULATORS: key-driven; hand or electric; 6, 7, 8, 10, 12 and 14 columns results capacities. For all figure-work where printed record not required. Electric duplex calculator has two accumulating registers: (1) for individual totals or calculations (2) accumulating grand total. Has new Burroughs direct subtraction key by use of a single key. Other styles include small desk drawer model weighing only 7½ lb., measuring 11½ in. by 7½ in.

ELECTRIC CARRIAGE TYPE-WRITERS: operated entirely from keyboard; built-in electric motor; electric carriage return; electric line spacing; electric shift. Wide selection of styles for invoices, cheques, receipts, etc.

NEW FANFOLD MACHINES: for continuous invoice and other multiple forms without interleaved carbons. Carriage opens automatically; forms released automatically; carriage returns automatically; carbons shift automatically; new forms lock in place automatically; carriage closes automatically.

CARTER-DAVIS LTD., Queen Elizabeth Street, London, S.E.1.

"PRIMUS" CONTINUOUS STATIONERY: with "Primus" attachment and carbon pack enables stationery to be used with any standard typewriter. Attachment eliminates waste time in typing multiple records; assembling, interleaving and removal of forms from machine abolished. It also makes typewriter dual-purpose machine—typewriter one minute, billing machine next; removing or replacing attachment not necessary.

MACHINE ACCOUNTING STATIONERY: fulfils requirements of alignment, registration, etc., for machine accounting.

DAILY BALANCE SYSTEM: for obtaining daily proven figures without use of accounting machines; machine method applied to pen and ink; allows writing three records in one operation; customer's statement, ledger account, daily journal. All entries balanced and proved correct at time of posting; customers' statements ready for mailing first of month. Daily journal, written at time of posting to ledger accounts, gives detailed summary of entries; analysis of sales can be included. Basic book-keeping principles observed throughout; only application is new method.

"PRIMUS" AUTOGRAPHIC REGISTER: for using continuous stationery for all types of hand-written records; open construction; simple to operate.

CARTER PARRATT, LTD., 316/23, Abbey House, Victoria St., London, S.W.1.

VISTEM is one of the most scientific developments of the visible card index system.

The essence of Vistem is simplicity. Cards stand vertically, each being about half an inch farther to the right than its predecessor. They are slotted at the bottom and rods running front to back of the drawer ensure cards retain their spacing. Top right-hand corner of each card is cut off and the name or index written or typewritten along this edge.

There are about thirty cards in each bank—number varying according to size of card—and each bank is separated by a divider with a celluloid top. These dividers can be thrown backwards and forwards so that cards can be consulted without removing them from drawer. First three letters of any card in the drawer are visible through celluloid top of divider. Since there are usually some ninety banks of cards in a drawer, any one of about 3,000 cards can be found immediately.

If a card is missing, the fact is signalled by the uncovering of a black rectangle on the card behind.

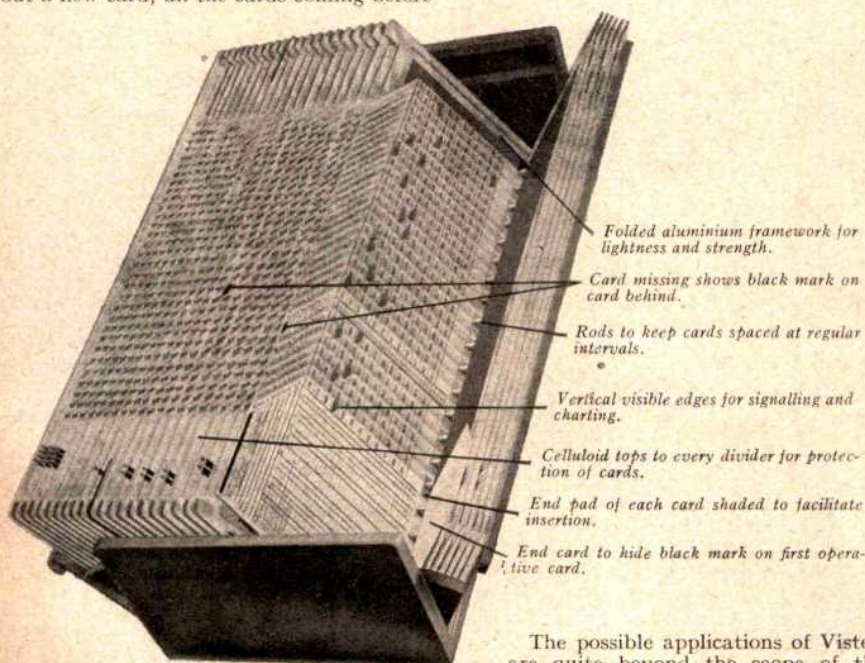
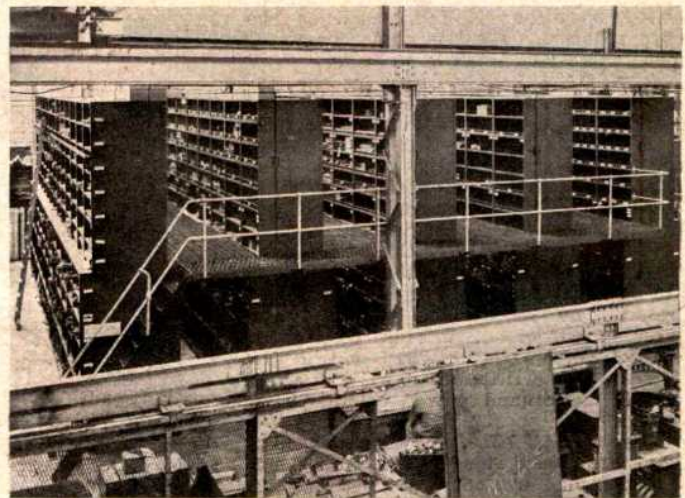
When an outfit is started a few empty spaces are left at the end of each bank for expansion. When it is desired to make out a new card, all the cards coming before

the new card in the appropriate bank are moved along one notch. In practice it is easy to move all such cards at once. Alternatively blank cards can be substituted for empty spaces. These can be titled as required then moved along to their correct position. When a bank is full, a spare guide is taken from back of tray and dropped into place so that half the cards in the full bank are in front of it and half behind it. Thus two banks each with ample expansion room are created.

When an outfit runs into several thousand cards the first three letters on each card may not be considered sufficient for quick reference. Thus in an outfit of 12,000 cards there may be about 150 names beginning "BAR." In this case it is helpful to attach lettered indicators to the dividers. Taking the above example, 150 names would run into about five banks and the appropriate dividers might be flagged "BAR," "BARK," "BARN," "BARR," "BART."

The vertical visible edge of the cards is used for signalling and charting and is invaluable for the control it gives to important records.

A recent installation, by Constructors Ltd., of steel shelving for stores, built in two tiers with a mezzanine floor, an arrangement of special interest as it solves the problem of more storage space required where floor space is not available



The 'Vistem' System

The possible applications of Vistem are quite beyond the scope of this notice. Carter-Parratt's advisory service is, however, available to everyone—freely, without obligation whatsoever.

See announcement on page 57.

CONSTRUCTORS LTD., Tyburn Road, Birmingham.

STEEL SHELVING AND STORAGE EQUIPMENT: based on "Adjusteel" standard components of posts, shelves, backs, partitions, bin fronts and dividers, doors, etc. Each unit complete with four posts; may be disconnected without removing single shelf. Single-faced stacks are two or more units bolted together; double-faced stacks made by placing two units of similar width and height back to back; any number units in length. "Pres-snap" bin dividers sub-divide shelving space.

STEEL CYCLE PARKS: sloping or horizontal parking single- or double-sided, fully or partly enclosed. In double-sided parks cycles occupy only 6 in. space width. Unit construction principle; steel coated in special rust preventive, finished in grey stoved enamel. Over 30 different types are available.

STEEL CLOTHES LOCKERS: one, two and four-tier models; fire-resisting; built on unit principle, can be added to or rearranged easily. Door frames welded

at all joints, bottom shelves louvred, feet made of rubber, door pressed to channel section on all edges, welded for strength. Six-lever Cotterill locks standard fitting; umbrella clip and drip tray, card or ivory number plate included. "Combination" lockers combine one or more one-tier units with two or four-tier units.

STEEL FILING CABINETS: finished in stoved olive-green enamel; automatic locks; frictionless drawer-slides based on extending suspension principle; lock-compressor to each door.

STEEL CUPBOARDS: stoved olive-green enamel finish; three-way locking. Built from standard shelving components; available in wide range of sizes.

"MERCANTILE" DESKS AND TABLES: washable tops of dark green "Conolin," bronze binding. Drawers rigid-built on steel slides; sliding shelf; standard finish stoved olive-green enamel. Desk available single and double pedestal; typists' tables with or without drawers.

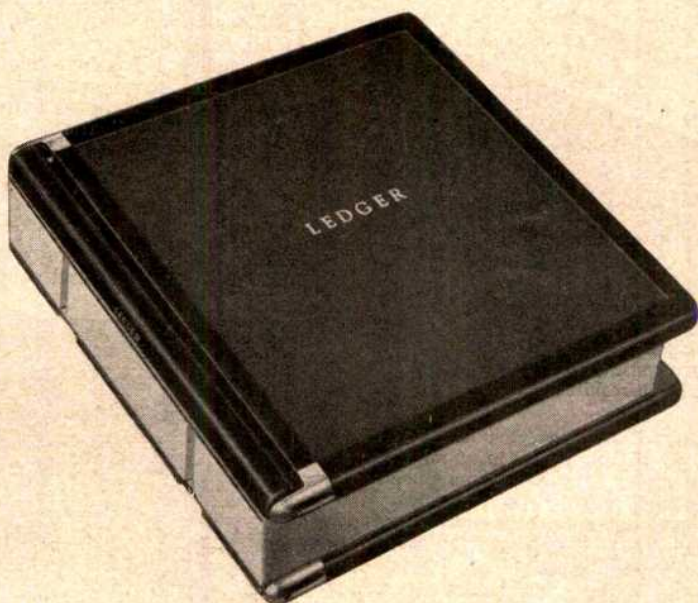
Company Also Makes: card index cases, stationery cabinets, letter racks and trays, wastepaper bins, etc.

See announcement on page 5.

CONTINENTAL TYPEWRITER CO., LTD., 97, Queen Victoria Street, London, E.C.4.

NEW 135-CHARACTER TYPEWRITER: technical terms in business

On Active Service for 35 years!



SUPPLIED 1902—STILL GIVING COMPLETE SATISFACTION

Messrs. Joseph Lyons & Co.,
Ltd., write :—

"We are glad to say—
that the *ledgers installed*
as long ago as 1902 are
still giving us complete
satisfaction."

The italics are ours. The claim is
NOT ours. It is made by a firm who,
following their original purchase,
have bought over 700 of our Binders.

How long have you had your
Binders ?

Are they giving complete
satisfaction ?

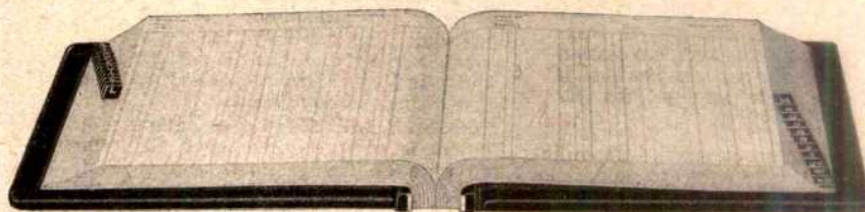
Will they continue to do so after
35 years ?

CCOPE-CHAT LOOSE LEAF BINDERS and Requisites are made in every type—Thong, Post, Section Post, Spring, etc., for pen or machine posting, and are made in a size which will suit your forms. Nothing but *proved* materials and highly skilled craftsmanship could produce these attractive Binders, which are finished in many coverings and edged with "Hardite"—an almost indestructible material of pleasing touch and shade. We *could* win your confidence by illustrating tests—such as that of a Gloucester County Council steam roller rolling and re-rolling over a binder taken from stock—but you do not buy a binder to be run over. You buy it to give lasting service under your own working conditions. The best test you can give a Cope-Chat Binder is to use one.

COPE-CHAT Quality costs no more.

WHY NOT SEND US YOUR ENQUIRIES NOW ?

Note the flat opening.
No binder of any make
will give you better
writing facilities. It is
a pleasure to use.



FULL DETAILS GLADLY BY RETURN POST

THE COPELAND-CHATTERSON CO., LTD.

(TEL. CITY 2284. 4 LINES)

EXCHANGE HOUSE, OLD CHANGE, LONDON, E.C.4

BRANCHES THROUGHOUT THE PROVINCES

and professional typing have suffered greatly through the limitations of standard machines. Continental have overcome this with two carriage shifts and three charac-

Vertical Visible Control systems for Mechanized Accountancy.

VISIBLE RECORDS: Probably the largest range offered by any combination

PRINTED FORMS, ETC.: Cope-Chat are essentially systems printers with precision machinery which produces all manner of business forms with perfect registration, alignment, perforation, numbering, etc., either in singles or in Multi-part sets of all sizes.

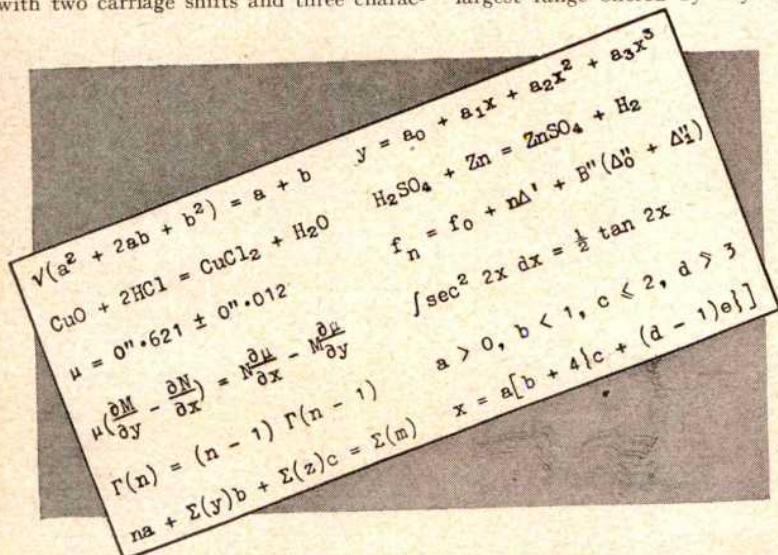
FIRE-PROTECTION CABINETS AND FILES: A wide range, many of which are specially designed for use with Machine Accounting and Vertical Visible. The Company manufacture special Fire-Protection tunnels for their machine accounting speedrail and undertake special work to suit abnormal requirements.

GENERAL: In addition to the comprehensive range of standard products Cope-Chat devise and manufacture special items in all their lines to meet special needs. Their policy is to investigate conditions and make recommendations in every sphere of organizational activity in business, without obligation.

See announcement on page 27.

COX & CO., Watford By-Pass, Watford, Herts.

STEEL TUBULAR FURNITURE: desks; tables; chairs for every grade of office and for works and canteens; nesting



Scientific and technical terms no longer present difficulties to Continental's new 135 character keyboard. The above example was done on a keyboard particularly for mathematical work. Acute, grave, circumflex, umlaut, tilde and accent(-) symbols can be put on special keys that do not cause horizontal movement of the carriage; hence back-spacing is not required

ters per key, 135 characters in all. The illustration shows some of the important things this new machine can type.

"GIANT" TYPEWRITER: with 36-in. carriage, types 700 letters per line. The value of this machine for statistical and other big-document work is obvious.



Standard typewriter converted to book-keeping by the 'Rapidus' attachment. Operator dials the required line and it automatically feeds into position for typing

"Rapidus" Attachment enables an ordinary Continental typewriter to undertake the book-keeping as well by typing, at one operation, cash book, bank paying-in slip, and receipt. Also, at one operation, ledger proof sheet, ledger account and monthly statement.

COPELAND-CHATTERSON CO., LTD., Exchange House, Old Change, London, E.C.4.

MACHINE-POSTING: Large variety of Trays and Trolleys, Binders, Speedrails and other forms of equipment in all styles and sizes, including Fire-protection Files and Cabinets specially adapted to accounting by Machines. Ledger Cards, Statements and other forms to suit any purpose.

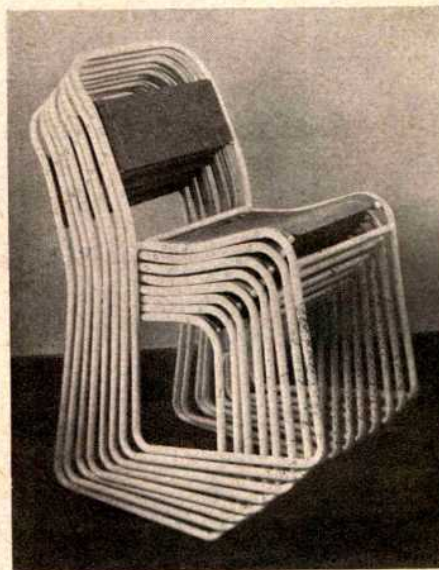
of firms. Card sizes vary from 2½ in. by 1½ in. to 16½ in. by 12 in., and there are several styles to suit various purposes in both pocket and non-pocket types. Wide experience and service in control methods.

PUNCHED CARD SYSTEMS: This hand-operated method of sorting and analysing requires no machinery or expensive operators. It is handled entirely by juniors; cards can be any size and can be a single-copy or any part of a multi-copy set. The card is always a document of original entry, and operation of the system can be centralized or otherwise at will and used for all manners of analysis and statistical purposes. The system is low in cost both to install and to maintain.

SLIP POST: This Unit Posting method employs each original entry in such a manner that copying and its attendant disadvantages are dispensed with. As the name implies, each entry, instead of being made in "omnibus" form, is made on a Unit Slip designed to be physically transferred, through numerous transactions in which it may be involved, to the final presentation or account. Posting speeds are amazing, reaching up to 1,500/2,000 per hour per girl junior operator. Slip Post Unit Slips can be punched for Paramount Sorting and can be arranged for display in Visible Record or other accounting systems and equipment.

LOOSE LEAF: The Cope-Chat range of binders is comprehensive over all forms and sizes of Thong, Post, Section Post, Spring, types. This firm patented the original first effective Loose Leaf binder, some of which are still in daily use. All Loose Leaf needs can be met from the Cope-Chat Range, and the sheets, indexes and accessories are up to the same high level of the binders.

CONTINUOUS STATIONERY: Inter-fold and Fanfold stationery, plus the "Fasta" Billing unit, is a fine combination for users of Continuous Stationery. The Fasta Billing unit costs only a couple of guineas or so and will convert any standard typewriter into a high-speed Billing Machine in less than five minutes without interfering with normal typewriter functions.



The great advantage of 'nesting' chairs is the ability to pack large numbers of them in a small space when they are not required. Hence their value in canteens, lecture halls, etc.

chairs and tables. Settees and reception-room furniture, trolleys, etc.

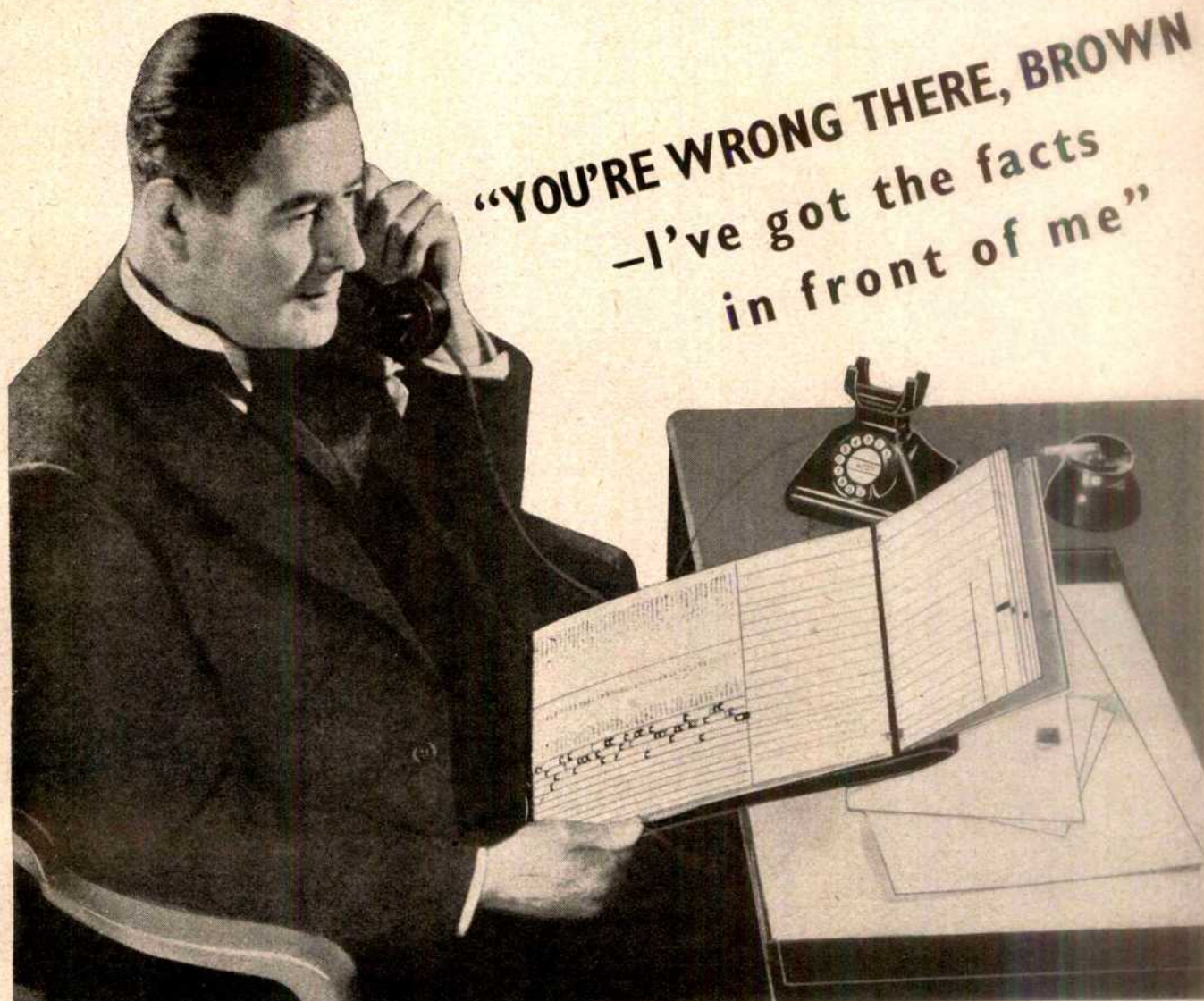
This type of furniture is notable for its light and hygienic qualities.

DEFINITIVE ACCOUNTING, LTD., Victoria House, Vernon Place, Southampton Row, London, W.C.1.

ACCOUNTING SYSTEM: The Definitive system, briefly, provides the main advantages of mechanized accounting without the use of "machines," and at a fraction of the cost.

It eliminates bound books of account. By posting direct to loose-leaf ledger forms superimposed on a "journal" or "control sheet," carbon copies are obtained of each group of transactions, such as Sales, Purchases, Cash Receipts and Payments, Discounts, etc. Monthly Statements attached together with a special carbon to a Customer's ledger sheet are written automatically and constitute an exact copy of the account. One single entry will post the ledger, statement, "control sheet" (or Day Book), and an-

IT HAPPENS IN YOUR BUSINESS (4)



**"YOU'RE WRONG THERE, BROWN
—I've got the facts
in front of me"**

A delicate situation arises. An important customer challenges prices and terms. Only the precise facts—immediately given—can prevent distrust, irritation, and loss of goodwill.

What is the scene in your office? Delays—excuses—annoyance—while clerks search frantically for the information? Or are the facts put into your hands a moment after you request them—with every detail clearly seen at a glance—on Shannon Visible Records?

In every office, works or store—wherever files are kept, Shannon Visible Records save time, and promote increased office efficiency.

Executives are provided with a tighter control over every move in their departments—for a flick of the finger shows them the immediate position, together with details of the past history of any transaction. All the key facts and figures of purchasing, production, output, and sales are available in a moment—grouped and collated for quick and easy reference.

Based on more than half a century's practical experience in planning and designing profit-earning office equipment, Shannon Visible Records incorporate improvements that meet to-day's needs most effect-

ively—and with greatest efficiency. Please write or telephone for details of this and other Shannon modern office equipment.

FREE! An indispensable text book for the progressive office. "The Key to Hidden Facts" is a 16-page illustrated book, which describes the endless possibilities of Shannon Visible Records in office and works, and will be sent free to executives on receipt of business card or letter heading. Write to-day.

* Be sure to see the range of SHANNON modern office equipment

on **STAND No. 68**

Business Efficiency Exhibition,
Olympia, Sept., 26th to Oct. 6th

THE Shannon LIMITED

visible records

THE SHANNON LIMITED IMPERIAL HOUSE 15, 17 & 19, KINGSWAY . LONDON W.C.2
Birmingham . Bristol . Manchester . Liverpool Newcastle-on-Tyne . Glasgow (Agents)
7728

other form serving as data for commission statements, job costing, analyses, etc. By this method perfect "control" is attained, and no posting can be arithmetically incorrect.

THE DICTAPHONE CO., LTD.,
Kingsway House, Kingsway, London,
W.C.2.

DICTAPHONE: A new cabinet, the "Progress," has been developed. It provides exceptional accessibility for the "off the desk" use of the Dictaphone, and is very compact, occupying a little over a foot of floor space.

The "Progress" cabinet accommodates either the Dictaphone dictating or transcribing machine of the standard model and either machine can be easily removed for desk, travel or home use.

At the front of the cabinet is a drop-panel which, when opened, reveals an

sensitive springs. These absorb vibration and prevent any interference with the reproduction.

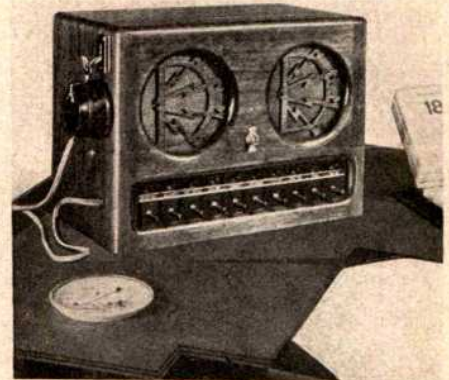
DICTAPHONE TELECORD makes an automatic record, when desired, of any telephone conversation from both ends of the line without interference with ordinary use of the telephone. Messages are received at much higher speed than is possible with shorthand, an important saving of time on long-distance telephoning. The recording being automatic, absolute accuracy is ensured as the message can be repeated as often as necessary. By using a microphone with the Telecord it is possible to obtain verbatim reports of staff meetings, conferences, and so on.

A recent congress in which speeches were delivered in French, German and English was reported with great success by means of the Telecord.

See announcement on page 1.

his duties until voice from the called dept. comes through the loud-speaker.

The chief executive can also ring in more departments at the same time, and all participants can hold conference without any one of them leaving his office.



The Dictaphone master station, the executive's instrument through which he gets priority over the system

Even visitors in the chief's office can also take part, though if desired that visitors shall not hear departmental replies, executive can, by using ear-piece, silence the loud-speaker and receive replies privately.

PRIORITY AND PRIVACY: Dictograph system enables members of all depts. to communicate with one another, but executive calls automatically get priority. Another useful feature is ability of executive to prevent interruption. Master instrument indicates who is calling; if executive does not wish to be disturbed he can, by turning a small switch, cut off the caller and indicate he is engaged.

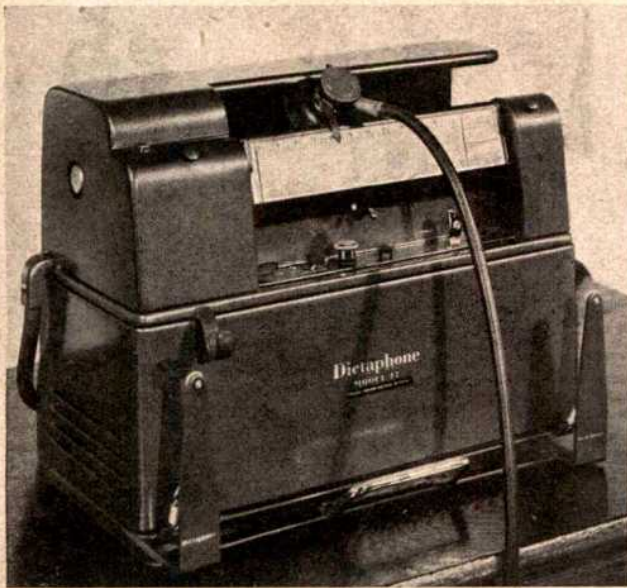
STAFF LOCATION: Dictograph Round-call and Dicto-call system, by coded signals of sound and lights, save time in finding individual members of the staff. Staff-location is also effected by loud-speakers distributed throughout the premises.

"PAGING," PUBLIC ADDRESS: loud-speaker systems for offices, factories, sports grounds, etc.

A.R.P. It is essential that air raid shelters have communication with a controlling point. Dictograph are working on such systems now and will be glad to give free advice on this important matter to any reader of BUSINESS.

DRYDENS, LTD., Brent Crescent,
North Circular Rd., London, N.W.10.

PRINTERS OF BUSINESS FORMS,
letters, booklets, advertising matter, etc.



The Dictaphone in its new Desk Mount

accessible correspondence drawer holding a supply of folders. The first folder is open ready, in the case of the dictating machine, to receive dictated matter. As each folder is removed the next automatically drops into position for use. For transcribing machine use, the empty folder is ready to receive the completed transcript. As the dictation is transcribed the typescript can be placed in the folder with any accompanying papers so that when the transcription is finished it is in the folder ready for return to the dictator. In this way the transcription and related papers are kept together ready for instant reference if necessary. Storage space of eight cylinders is provided.

The Dictaphone De Luxe Cabinet, introduced two years ago, has been improved in several minor details.

The high value of floor space in modern offices has focused attention on the Dictaphone Desk Mount, which effects considerable economy in this respect.

In the past it has been the practice to supply the transcribing Dictaphone, used by the Secretary, on one of the stands or cabinets made for the purpose. With the Desk Mount in use, the Transcribing Dictaphone may be placed on the typist's table. Thus, not only is floor space saved but, especially where a number of girls are employed, the symmetrical and orderly appearance of the office is materially enhanced.

The Desk Mount is, in effect, a "cradle" in which the Dictaphone is mounted on

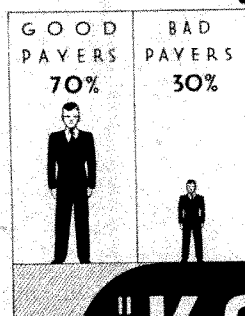
DICTOGRAPH TELEPHONES, LTD., Aurelia Rd., Croydon, Surrey.

DICTOGRAPH EXECUTIVE OR MASTER STATION private intercommunicating telephone. Dictograph master station is installed on chief executive's desk; upon instrument is a row of small switch keys, each connected with a department of the business. The executive desiring to talk with dept. No. 1 will touch key No. 1. That will ring substation in dept. No. 1; light on substation indicates chief executive calling. Ringing and light continue until person called attends the substation. Meanwhile, executive goes uninterruptedly on with



The New Enclosed Model Ediphone. See Notice on next page

... and now



KARDEX

"KOLECTROL"

—the amazingly simple scheme for H.P. accounts

Why allow your Hire Purchase accounting system to be dictated by the 30 % of people who fall into arrears ?

The Kardex Kolectrol system is first framed to handle the 70% of good payers with the minimum effort, and to picture these as the clean background upon which to detect the bad payers—like footmarks in the snow.

Clerical effort is thus concentrated in the direction where it is most needed—first, to locate delinquents ; secondly, to check the spread of bad paying habits; thirdly, to collect the cash outstanding.

Kolectrol cuts H.P. overheads in half, whether applied to 500 accounts or 50,000.

Here's a way to cut costs and increase profits. Get to know all about it by writing or 'phoning for booklet No. 139.

KARDEX

(DIVISION OF LIBRARY BUREAU LTD)

1, LEADENHALL ST., LONDON, E.C.3

('Phone : MANSion House, 3921)

BRANCHES IN ALL PRINCIPAL CITIES

"DUAL-USE" LETTER-FORM: patented letter-form which is combination of letter, sales literature and reply form. Eliminates "enclosures" in mailing. Looks like normal letter, but has folder integral with letter which provides extra 60 sq. in. space on which any printed message can be displayed. One section detachable; can be used as reply form.

THOMAS A. EDISON, LTD., Vernon Place, Southampton Row, London, W.C.1.

"TRUVOX" RECORDING UNIT of the New Ediphone has still greater clarity. The Safety Light prevents dictation when operating lever is in wrong position. Appearance has been improved. It is lighter, easier to handle.

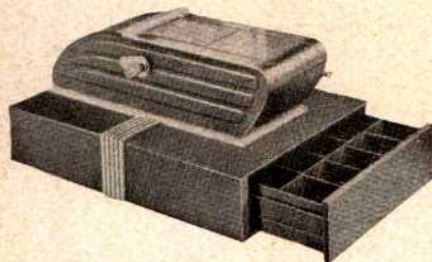
NEW DESK MODEL: this will be on show for the first time at the Business Efficiency Exhibition this month. See announcement on page 35.

EGRY, LTD., Warple Way, Acton, London, W.3.

STREAMLINED "TRU-PAK" REGISTER: is virtually a mechanized manifold book and will speed up the production of routine forms requiring carbon copies by eliminating altogether the interleaving of carbon paper.

The requisite sets of forms are provided in continuous lengths, so that at one writing and one turn of the operating handle the written set is discharged from the Register and a fresh set is brought into position, ready for use without handling the stationery.

One or more complete copies of the issued set of forms is retained under lock



The 'Tru-Pak' Auditor, an extremely neat combination of the Register and a special steel cash till

in the Register as a master control copy, thus providing protection over all transactions entered on the machine.

This Register, and other types of Egray Registers, can be mounted on a steel Cash Till, which operates automatically and delivers a receipt. This combination gives complete control over petty cash or is suitable for the retail trader.

"HANDIPAX" REGISTER: embodies the basic advantages of the "True-Pak" Register in a convenient portable form.

The great advantage is that it can thus be easily carried from job to job in office, warehouse or factory.

COM-PAK MANIFOLDER, for the simple purpose of producing an original written form and up to 5 carbon copies. One turn of the handle delivers all the forms in the set for distribution to departments.

COM-PAK RECORD, similar to the Manifolder but retains one copy of written form within locked compartment.

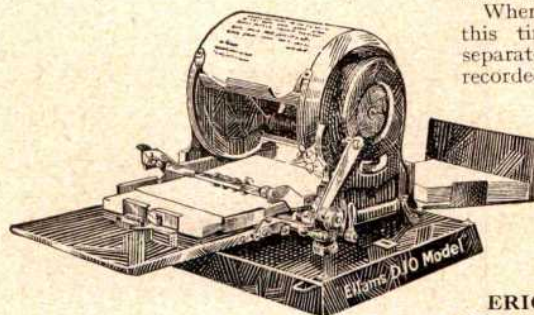
COM-PAK SUMMARY: Unlike the Com-Pak Record, which retains a complete copy of the issued forms, this model retains a dissected analysis or summary of certain selected items only.

"SPEED-FEED" ATTACHMENT: for typewriter introduces the benefits of continuous stationery. It is made to fit all standard machines and snaps on easily for billing or other work where continuous forms can be advantageously used.

A feature of the "Speed-Feed" is an automatic dual aligning-pin that engages punched holes at the head of each set of forms; alignment of all forms in the set being fed into the typewriter is thus controlled, ensuring automatic registration.

ELLAMS DUPLICATOR CO., LTD., 12 King Street, Cheapside, London, E.C.2.

Duplicating equipment: For nearly 50 years this firm has specialized in the manufacture of duplicating machines of many



Ellams Popular D.10 Rotary

varieties from the simple, hand-operated "Bantam," costing from 35s., to the M.10 automatic electric model, at 58 guineas.

M.10 MODEL: A rotary duplicator with variable printing speeds from 40-120 copies per minute. It is fitted with variable printing pressure and balance which ensures regular printing strength. The printed copies are counted, and automatic mechanism provides that only the number of copies required are printed.

M.1 MODEL: To a great extent the same as M.10, with the exception of the power drive. It prints from a bulk supply of paper, of heavy substance, and considerably more than a ream, when lighter paper is used.

D.10 MODEL: One of the most popular models, attractively priced at 18 guineas. It is a "Rotary," with a simplified form of self-feeding and has all the advantages of speed, simplicity, variable and balance pressure and is fitted with a counter.

COLOUR PRINTING: This machine can be supplied with two cylinders which are easily interchangeable from one colour to another.

INKING is semi-automatic; one application will give many hundreds of copies.

DUPLICATING SUPPLIES: Every type of duplicating supply is available; carbon papers, diaphragm rollers, inking, pressure rollers for all Rotary models. Finger cleaning cream, oil, writing plates, sketching outfits, writing pens, impression papers, correcting fluids, duplicating inks, cabinets, tables, stencil papers and vellum.

See announcement on page 41.

ENGLISH CLOCK SYSTEMS, LTD., Relyon House, 57/63, Wharfedale Rd., King's Cross, London, N.1.

SMITH FULLY AUTOMATIC TIME-RECORDER AND COMBINED JOB-COSTING MACHINE: The fully automatic features of this machine now serve this double purpose. Two sets of cards are

used, one for recording arrivals and departures, the other for job-costing and actual production time.

Although the factory manager was often aware that operators were paid for 8½ hours work per day, yet actual production time was only 8 hours, it was not, before the introduction of the Smith fully Automatic Time Recorder, an easy matter to prove it to him.

The illustration of the specimen job-costing card shows how very easily this is proved—a typical example of an 8½-hour working day with 7¼ hours only of production time.

This loss of time occurs chiefly between completion of one job and the starting of another, and is not always the fault of the operator. It does, however, call for investigation which might reveal that jobs were not being planned in advance, or possibly the stores were not issuing material, or maybe they were out of stock.

When it is necessary to set up a machine this time can, of course, be recorded separately, as in like manner can be recorded "breakdowns" due to possibly faulty material or machinery.

It becomes a simple matter, once all these faults are shown on the card, to rectify them, and the result must be greater output, reduced costs, and higher efficiency.

See announcement, page 53.

ERICSSON TELEPHONES, LTD., 22, Lincoln's Inn Fields, London, W.C.2.

INTERNAL COMMUNICATION TELEPHONES, Loud-speaker and other systems. For speedy inter-office contacts the loud-speaker type phone has, of course, established itself, and Ericsson instruments are as well known in this field as their G.P.O. instruments are in the more technical and official fields.

200-LINE PRIVATE AUTO-EXCHANGE is of great interest in these days when so many firms have decentralized works and are operating on two or more shifts.

For example, these automatic exchanges installed, one in each of two works 15 or 20 miles apart, can be connected by tie-line equipment so that 24-hours-a-day communication can be maintained between both switchboards without the use of an intervening operator. Picture next page.

To any business man needing advice on an inter-communication problem Ericsson's advisory dept. is freely open.

EVERTAUT, LTD., Walsall Road, Perry Bar, Birmingham, 22.

SCIENTIFIC OFFICE POSTURE

SEATING: a wide range of County Class Chairs for typists, clerks and office workers. These models have been improved and added to by the new 74 model, which has an exceptionally comfortable spring seat and padded back-rest. Tubular base incorporates a new hand adjustment fitted to top of patent Evertaut Locking Box. This is for raising or lowering seat height, and enables seat to revolve without alteration of actual height level. Another feature: all models are now fitted with bakelite handles for easier adjustment of height and angle of back-rest.

CHAIRS FOR OFFICE EXECUTIVES: the 'Chairman' model BTS68. Sturdy-build and comfortable proportions of this chair command attention to the practicable mind. The 'Chairman' revolves without alteration of seat height and comfortable tilting movement is obtained without resource to noisy springs, action

THE
ALL-BRITISH

POWERS

PUNCHED CARD
ACCOUNTING



The New Powers-Samas Automatic Key Punch

You are invited to visit Stands 19 & 20 at the Business Efficiency Exhibition, Olympia, 26th September—6th October 1939, to witness demonstrations of the complete range of Powers-One, Powers-Four and Powers-Samas equipment and in addition three entirely new machines, The Powers Transcriber, the Powers Interpolator and the new Powers-Samas Tabulator, which can print 130 alphabetical characters from one card.

Powers all-British punched card accounting machines can be purchased, hire-purchased or rented on very attractive terms.

If unable to visit the exhibition write for descriptive literature and a complete demonstration of Powers punched card methods.

POWERS-SAMAS ACCOUNTING MACHINES, LTD.

POWERS-SAMAS HOUSE, HOLBORN BARS, LONDON, E.C.1



The New Evertaut Model 74 typist's chair with improved adjustments that give a higher standard of comfort

being stabilized by silent rubber torque unit. Adjustment for height and tension also provided.

Two more models for Executive use are BTS66 and BS62. Both built on similar but somewhat larger base than County Class Range.

EVERTAUT STEEL WORKS SEATING: basic idea at the root of all Evertaut Works Seats is the elimination of fatigue in modern industry. A slumped sitting position can cause countless little irritations which result in fatigue and inattention to work. A correct sitting position is a first aid to efficiency.

Stools and Chairs to suit every class of work and every style of worker are included in the Evertaut series.

STEEL EQUIPMENT: adjustable Steel Shelving for Office and Works' use. Shelving is manufactured in two types: light type for offices and the lighter materials to be stored in the works; the heavy for purely works' use. Drawers or dividers can be fitted to shelving as required. Made in standard sizes and can be easily dismantled or moved.

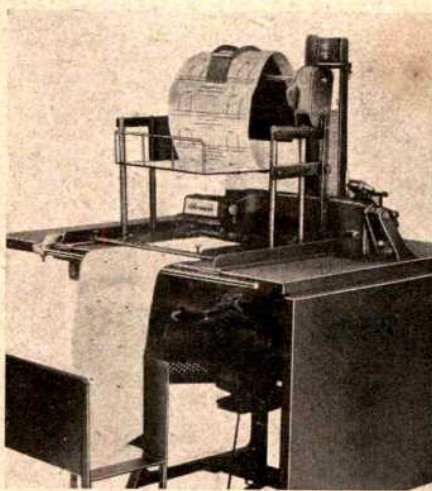
STEEL CLOTHES LOCKERS FOR OFFICES AND WORKS: specially durable for rough usage as they embody doors with special stiffening channels which prevent "whip." Fitted with slam-pattern lock and two keys, all locks being made to differ. Doors are "louvred" for ventilation and fit flush with outside walls of the locker, making it impossible for them to be levered open.

Other items of Steel Equipment will include steel waste-paper receptacles, hat- and coat-stands, correspondence trays, transfer-boxes, etc.

FANFOLD, LTD., North Circular Road, London, N.W.2.

FANFOLD TABULINER: one of the latest products of this company. That continuous stationery has greatly speeded up all forms of progressive typing is an accepted fact, and especially has it still further increased the scope of certain types of machines such as high-capacity tabulators.

The Tabuliner, however, has now been introduced to control the continuous forms. It is a simple device which accurately aligns the forms, by means of only



The Fanfold new Conformulator

two aligning holes, and feeds them automatically through the tabulating machine. It requires no alteration to the machines or platens—does not interfere with the use of cut forms when occasion requires—and may be attached or removed quickly. It will control and align any number of copies which the tabulating machine itself will handle.

As the device is geared to the tabulating machine platen, the action is entirely synchronized—with no creeping of forms or tearing of aligning holes. The two aligning holes in the top of each set of forms are all that are needed, there is no need for punch holes along the edges of forms or carbons.

SIMPLI-RITE: means just what it says; it refers to a neat-looking Manifold Register using Fanfold forms. Carbons are retained in a locked compartment. Also other types of Registers, including—

THE CASHIER, in which is incorporated a compartmented cash-till. All these Registers are of very fine appearance.

CARBON SNAP-OUT FORMS: multi-carbon business forms with inexpensive carbon paper already interleaved, supplied in sets with carbons and forms secured at stub. After typing, the forms are snapped apart—carbons remain affixed to stub—forms loose. Forms which require additions may be left with carbons affixed for subsequent typing.

SPEEDFORMS: specially devised for use on standard typewriters and accounting machines. Used with Fanfold Speed-o-form Attachment (which can be put on and off the machine in 5 seconds) the user has the economy of continuous-form typing without the purchase of expensive equipment. Claim is that an operator can give 50 per cent more output with less fatigue with Speed-o-form.

SPEEDOFILE: claimed as the most rapid loose-leaf binder.

See announcement on page 47.

FELT & TARRANT, LIMITED, Aldwych House, Aldwych, London, W.C.2.

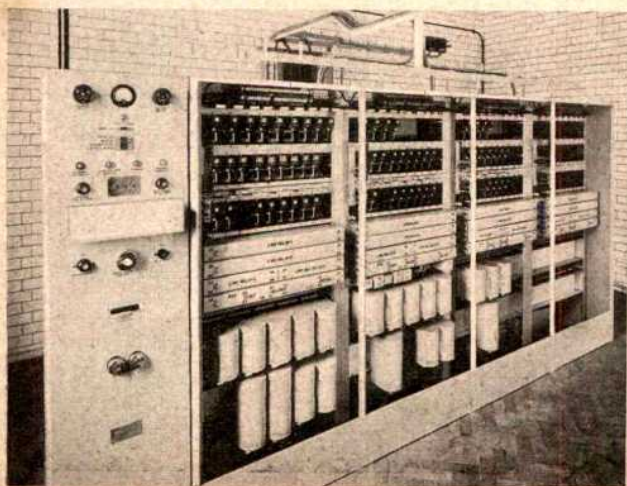
CONTROLLED-KEY COMPTOMETER: adds, multiplies, divides and subtracts in money, weights, measures, whole numbers and fractions; speed unlimited because operated solely by one motion, direct key-action; the automatic controls, "controlled-key" and "clear register signals" guard against human errors in operation.

ELECTRIC CONTROLLED-KEY COMPTOMETER: new electric "K" model; short, light key stroke; automatic controls for accuracy; has "controlled-keys" and "clear register signals."

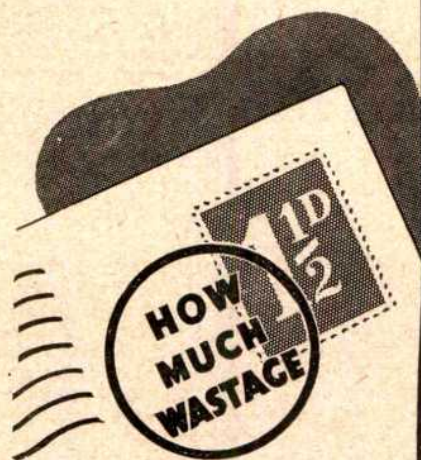
MODEL "J" COMPTOMETER: nine different sizes suitable for invoicing, costing, wages, job tickets, stock sheets, analysis and every other figure work; automatic controls.

NEW SUPERTOTALIZER COMPTOMETER: for all office figure work; enables items to be transferred and stored in separate register; sub-totals, whether additions or extensions, can be taken off item by item from first register while accumulated total is automatically obtained in second register. Machine can be used as standard model when not required for special duplex work.

COMPTOMETER SYSTEMS: the bigger the problem, the bigger the machine needed, is not always the case. Many firms, large and small, have adopted the simpler methods advocated by Comptometer and saved considerably on initial costs and upkeep expenses. Everyone interested in office and factory management is invited to investigate the Comptometer system of unit tickets, with or without the comptometer pegboard forms, for sales analysis, material- and labour-costing, stock control, expenses allocations, every kind of analysis and figure-work.



Ericsson's 200-line private automatic phone exchange is of particular interest in these days when so many firms are decentralizing. It gives 24 hours a day service, without an operator, between points miles apart. See notice on Page 32



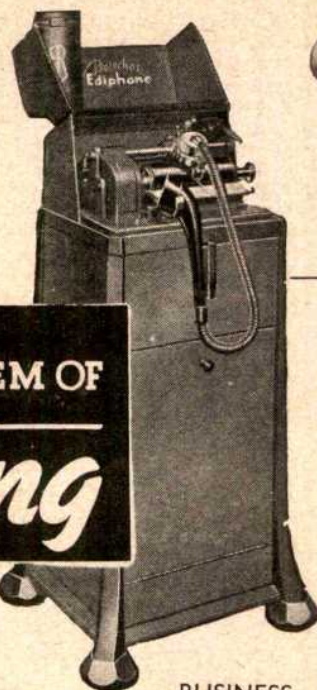
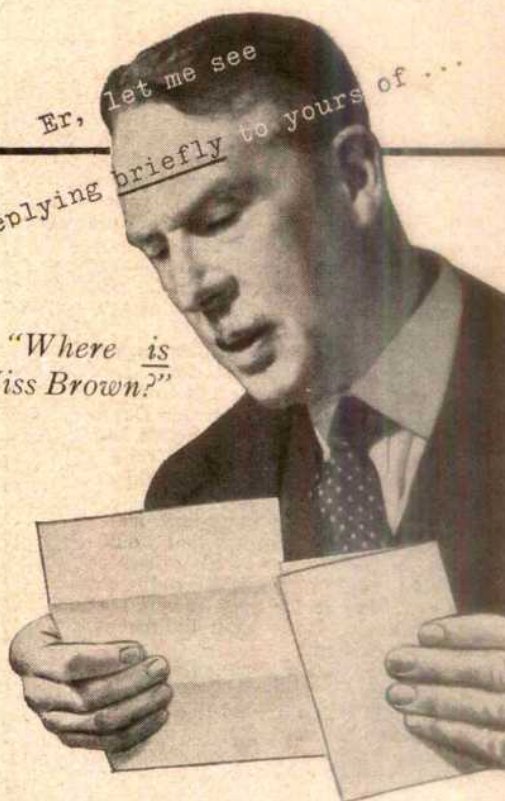
partment
ney Limited
Street, E.C.4.

1½d POSTAGE, BUT DICTATION DELAYS COST POUNDS!

Postage and stationery costs are nothing compared with the cost of dictating correspondence—the cost of a busy executive's time. But Ediphone Voice-Writing saves the executive an hour of this time a day. It cuts out 60 minutes of 'wasted effort; effort spent in "holding things in mind" until a typist is available; effort spent in "going over the ground again" when she arrives. Of course, it saves the typist's time, too, and enables her to work in greater comfort.

Er, let me see
Replying briefly to yours of ...

"Where is
Miss Brown?"



EDIPHONE SYSTEM OF *Voice-Writing*

Write for full particulars or for FREE DEMONSTRATION AT YOUR DESK without obligation.

For recording telephone conversations, Board-room conferences, minutes of public meetings, speeches, etc., use the TELEDIPHONE.

EDIPHONE USERS INCLUDE:

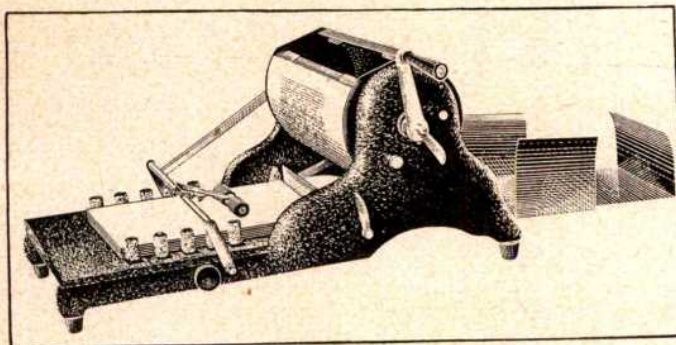
Bedfordshire County Council	Kent County Council
British Thomson-Houston Co.	Legal & General Assurance Society, Ltd.
The Chloride Electrical Storage Co., Ltd. (Exide)	J. Lyons & Co., Ltd.
Ford Motor Co., Ltd.	Morris Motors, Ltd.
The Gramophone Co., Ltd.	Oxfordshire County Council
Imperial Chemical Industries, Ltd.	Royal Borough of Kingston
	AND MANY OTHERS.

BUSINESS EFFICIENCY EXHIBITION OLYMPIA
September 26–October 6 1939 **STAND No. 21**

FERMA, LTD., Imperial House, 80-86, Regent St., London, W.1.

A NEW DUPLICATOR: from many distinct points of view this new reproducer of Ferma's is one of the most interesting that has come into the market.

In the first place it comes within that popular low-price range which this com-



Smart in appearance, with improved mechanism, backed by a 5 years' guarantee and a really comprehensive after-sales service this new low-price Duplicator by Ferma Ltd., is one of the season's attractive propositions

pany has so successfully pioneered for over four years. This model costing but £12 10s.

Secondly, the machine has been substantially improved, both in operation and appearance, even over its successful prototypes. It has a new, patented, paper-feeding tray of a type that is a great advance on similar equipment. Also a new type drum and stencil arrangement have been incorporated which make still easier the smooth and effortless attachment and removal of stencils.

All moving parts run on ball-bearings, a fact that considerably assists easy, quiet running and minimizes wear and tear.

In the third place, although this Duplicator is in the low-price field, Ferma provide Service to users of an extent that is usually associated only with much higher-priced equipment.

This is an extremely important factor as it not infrequently happens that would-be users of low-priced and otherwise thoroughly good mechanical equipment avoid purchasing it for very reason that after-sales Service is so often indifferent, or even non-existent.

Finally, this latest Ferma model is backed by a five years' guarantee.

With an understanding of the important 'plus' points above, it should only be necessary to see this machine actually at work to realize that Ferma have produced something that will have an enormous appeal.

FLASHDEX MANUFACTURING CO., 17 Chiswell Street, E.C.2.

FLASHDEX STRIP-INDEX: a new British-made Strip-Index holder accommodating 1,000 strips. Occupying no more space than a telephone, it is a real executive desk-aid for the speedy location of selected names, facts or any other frequently used data.

It is claimed of this new Index that it is of better quality and of easier-to-use design than any similar product now available at twice its price.

See announcement on page 45.

GLEDHILL-BROOK TIME RECORDERS LTD., Empire Works, Huddersfield.

TIME-RECORDERS: printed time records of attendance, labour costs, machine hours or transport; for use in office, factory, warehouse, shop, etc. Many models available; feature is 'the Clipper' mechanism, designed for costing and time-keeping; device clips piece from card each time the card is inserted for

time-recording; clip allows card to drop step lower at next registration. Clipper model used for (a) time-recording; (b) job-costing, (c) both, (d) recording time machine run and idle hours.

SYNCHRONOUS MOTOR-DRIVE MODELS: fitted with G.B. synchronous motor-drive; enables recorder to be

plugged into electric supply; no master clock needed to give power-impulse.

DESK AUTOGRAPHS RECORDER: is special model for salaried staffs; signature machine.

UNIVERSAL PORTABLE RECORDER: replaces time-stamps, functions as time-recorder; registers time on sheet or card, any size, by depressing table on which document rests; can be used for timing receipt, despatch of letters, etc., start and finish of jobs or straightforward time-recording. Various other models also available.

See this firm's announcement, page 55.

IMPERIAL TYPEWRITER CO., LTD., East Park Road, Leicester.

IMPERIAL SIMPLEX VERTICAL ACCOUNTING MACHINE: for invoicing, statement writing, statistical reports and all work involving writing and addition of columns of figures. Principal features include complete visibility of all work in machine; left- or right-hand palm tabulator fitted as required; various keyboard arrangements to suit requirements; totalizers of any capacity can be used, and boxes with fractions can be supplied. Imperial attachments for top and front feeding and billing, etc., can be fitted. Also the machine can be used as an ordinary typewriter.

IMPERIAL DUPLEX CROSS ACCOUNTING MACHINE: almost all accounting work can be handled by this

machine. Three totalizers give two vertical totals and a double cross proof. The totalizers and actuator mechanisms are totally enclosed. The Imperial Duplex has an ordinary carriage and is as fast to operate as a standard typewriter. Addition, subtraction and non-register are fully automatic, and reverse key for writing out totals or corrections is fitted. This key automatically prints red italic pin-point type, giving proof that the mechanism is reversed.

IMPERIAL SIMPLEX CROSS ACCOUNTING MACHINE: can add horizontally, number of columns depending only upon length of carriage. Though it can handle a variety of work, only one totalizer is necessary. It is also possible on the Vertical Cross to add up any number of vertical columns, giving a common total. Standard equipment includes £100,000 tabulator, protected adding mechanism and keys, left- or right-hand palm tabulator, automatic subtraction switch-over, pin-point figures, automatic red on reverse, credits, etc. Adding mechanism can be instantly decoupled, making machine into ordinary typewriter.

These models are, of course, in addition to standard Imperial Model 50, Quiet Model 55 and 'Good Companion' Portable Typewriters.

See announcement on page 49.

INTERNATIONAL COIN COUNTING MACHINE CO., LTD., 133-141, Rosebery Avenue, London, E.C.1.

H3 COIN- OR TOKEN-COUNTING machine, electrically operated, counts and records on the indicator. Automatically stops when required number of coins have been counted. Experienced operator can fill 350 bags of 60 pennies each in one hour, or make a continuous count of 60,000 coins an hour.

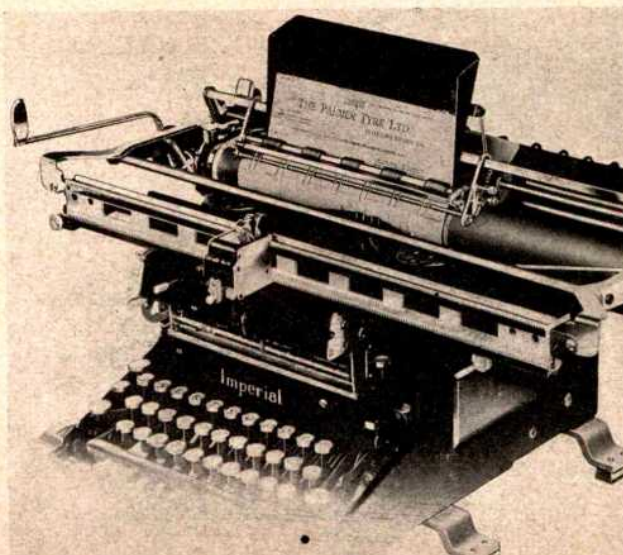
H5 COUNTER: similar to above but with spinning gear for packeting coins into rolls.

TYPE J: similar to H3 but hand-operated.

TYPE JW: Similar to Type J but is for counting 2s. 6d., 2s., 1s., 3d., 1d., and ½d. It stops automatically at £5 silver and 5s. copper. This machine is particularly valuable in wages' depts.

K1 to K4 COIN SORTERS operate up to a sorting speed (electrically operated) of £3,500-£4,000 per hour.

"RAPID" ENVELOPE OPENER: for the mail-room, electrically operated Type E3 has capacity of 1,000 letters per



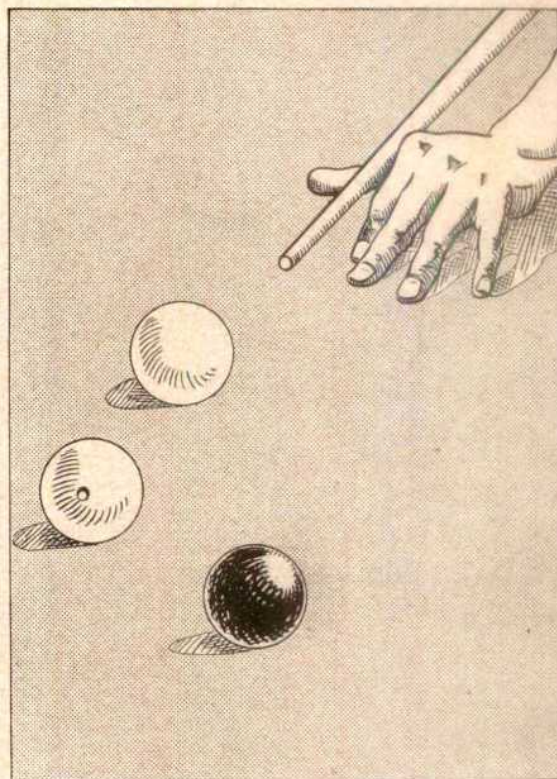
The Imperial Simplex Accounting Machine fitted with 102 attachment which allows a cash sheet, journal sheet or similar form to be fed in and line spaced independently of account cards, cheques, etc.

"Smooth as a Billiard Ball"

Proverbial? Yes—but it only indicates that however accomplished the player may be he cannot be expected to bring off the perfect shot without materials that assure precision and smooth running.

However efficient your stenographer may be, she cannot keep up, for hours on end, a peak-high production-standard on tedious tasks such as billing, unless she uses the correct stationery for such work.

Repetitive routine record-work of this nature is speeded up at least 30 per cent, by the use of

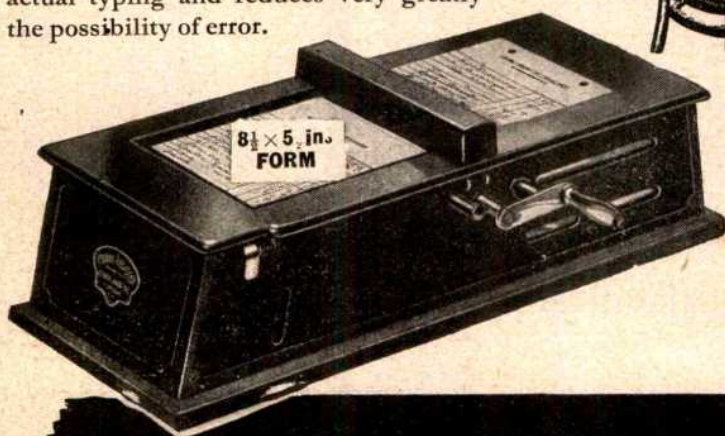


PRIMUS CONTINUOUS STATIONERY

The forms are fed smoothly to the typewriter, relieving the operator of all time-wasting and irritating tasks such as inserting, aligning and removing forms, interleaving carbons, etc. The elimination of these unnecessary operations assures greater concentration on actual typing and reduces very greatly the possibility of error.



The PRIMUS attachment, as supplied by us, fits any typewriter and facilitates the smooth flow of continuous forms. It allows the machine at a moment's notice to be used for either billing or ordinary correspondence work.



FOR HANDWRITTEN RECORDS the PRIMUS Autographic Register for use with Continuous Stationery ensures the same speedy smooth operation, while a copy automatically locked in the machine provides your auditor with a check on each transaction.

CARTER-DAVIS

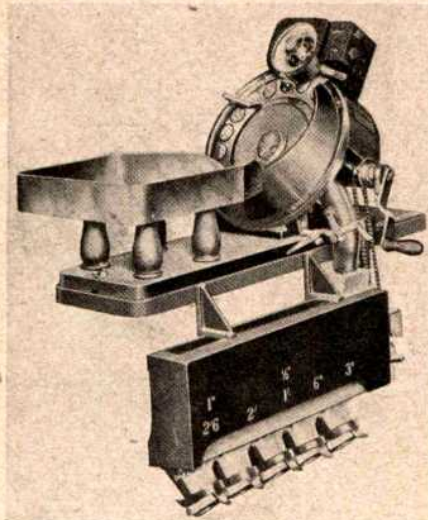
L I M I T E D

QUEEN

ELIZABETH

STREET. S. E. I

Phone: HOP. 0204-5-6



International mixed coin counting machine, hand operated

minute. Hand-operated E5 has a speed of 500 per minute.

The Coin-Counting and the Mail-Room Equipment can be supplied by this company on a rental basis, with free maintenance.

See announcement on page 51.

PERCY JONES (TWINLOCK) LTD., Chansitor House, Chancery Lane, London, W.C.2.

MACHINE ACCOUNTING EQUIPMENT: manufacturers of Twinlock Loose Leaf Books have designed equipment called Post Haste. Device provides for accounting machinery need of front feed; sheets have unbroken edge; feeding-edge devoid of punching, etc.

RUBBER-BOUND BOOKS: rubber-edge feature now incorporated in Twinlock line. Consists of dovetailing, on wearing edge of covers, a thick rubber tread; protects desk, prevents damage to binders. Improvement first used on Twinlock Vulcan Thong ledger-binder. Another improvement is that Twinlock ledger sheets have series of compressed grooves down binding edge; enhances flat opening of sheets, strengthens paper at hinge.

THONG LEDGERS: Vulcan Thong binder for ledgers and books. Sheets added or removed quickly; lies flat upon desk, gives every sheet flat writing surface; minimum holding capacity, one sheet. Another thong binder is Sentinel, used where something not so fine as Vulcan is required.

STEEL-BACK LEDGERS: Twinlock Capacity Plus allows withdrawing from covers of leaves *en bloc*, together with posts, in a moment; great advantage when sheets inserted or removed; perfect alignment.

VISIBLE RECORDS: Visible Indexing; thousands of items of important data stored in visible binders, yet available for instant reference.

SAMUEL JONES & CO., LTD., Bridewell Place, London, E.C.4.

GUMSTRIP SEALING TAPE HOLDER: no larger than a matchbox, this Bakelite holder contains a roll of sealing tape that is fed out by a stroke of the thumb. One of the neatest little sealers to be found anywhere.

All other gummed sealing tape supplies.

Perforated address slips in rolls for continuous feeding into typewriter. Visible Filing Strips, Postal Wrappers, etc.

KALAMAZOO, LTD., Northfield, Birmingham, 31.

STANDARD LOOSE-LEAF EQUIPMENT FOR PEN-POSTING: a wide range of types and sizes, literally exemplifying the slogan "A book for every purpose." Kalamazoo has a Sheets Library of some 100,000 different rulings.

An important feature in connection with the Loose-leaf system is the new and ingenious Storage Binder range. It is no longer necessary to remove sheets from one's second stage of storage in order to put them in Permanent Storage form. The back cover of the second-stage Binder, complete with all its contents, is simply removed and a permanent cover fitted. For many purposes it will be realized what a great saving of time is represented by this new facility.

VISIBLE RECORDING EQUIPMENT: two main types—one for actual recording and the other for Strip Indexing. Both these forms of Visible Equipment are in book form, and it is claimed that they take up one-third of the space and cost one-third the price of the steel cabinet forms of Visible Equipment.

MACHINE ACCOUNTING EQUIPMENT: the Machine Accounting section of the Kalamazoo range includes several distinct types of containers for Machine Accounting cards. The various types fall into two broad categories:

- (a) Tray-container type.
- (b) Binder type.

In the first category are included not only the more normal insert-trays, but also Kalamazoo Card-Fast which ingeniously tips the cards in their container from a vertical position for reference and posting to a horizontal position for efficient storage.

KAYE'S ROTAPRINT AGENCY LTD., Cecil House, 57a Holborn Viaduct, London, E.C.1.

OFFSET LITHO PRINTING AND DUPLICATING MACHINES: power-operated, Fully Automatic Standard RKI Model; paper size up to 14 by 9 in.; thickness from 11 lb. Bank to 8-sheet card, any texture; 4,000 impressions an hour. Automatic features: damping, inking, paper-feed, cut-out, drive, etc.

DOUBLE-WIDTH FULLY AUTOMATIC R30 MODEL: power-operated, paper size up to 20 by 14 in.; thickness from 9 lb. Bank to 4-sheet card, any texture; over 5,000 impressions an hour. Automatic features: suction-feed, damping, inking, side-lay, cut-out, joggers, vernier adjustment to head- and tail-lay, drive, electric motor; guaranteed "hair-line" register, etc.

COMBINED AUTOMATIC SHEET AND ROLL-FEED RS MODEL: power-operated, automatically feeds from sheets in stack, or paper automatically cut from roll, at 6,000 impressions per hour; paper size 8½ by 11½ in.

LARGE COMBINED AUTOMATIC SHEET AND ROLL-FEED RGs MODEL: power-operated, paper size 17 by 11½ in.; similar to RS model.

R50 JUNIOR PRINTING AND DUPLICATING MODEL: paper size up to 14 by 9 in.; 3,000 impressions per hour; automatic paper-feed, motor, etc.

All models produce single and multi-colour work; simply operated; can be used by any junior after a few days' training.

SERVICE: offset litho machines backed by service to prepare master sheets.

Company have service factory employing over 250 technicians. Departments include: Photographic studio with over £2,000 worth of cameras; Typesetting with all modern faces; two Monotype casters and two keyboards; platens for printing type direct on to master sheets, etc.; Photomechanical; Stone and copper plate; Mechanical; Binding, Perforating, stitching and all services incidental to printing trade; Paper department.

BANCROFT FOLDING-MACHINES: the Bancroft "Supreme" is a universal, fully automatic machine, capable of producing every type of fold or combination of folds at high speed on every class of paper. In addition to handling the output of the printing and publicity, it will fold typed circulars, invoices and statements, and the whole of the normal mail. The operation and adjustment are so simple that the machine can be handled by any office junior, and the change-over from one type of fold to another is a matter of seconds only.

Another important advantage which Bancroft shares with Rotaprint is, that it is not necessary to set up a department to accommodate the machine. It occupies very little floor-space, it is nearly silent and is a very good looker indeed.

The machine has self-lubricating bearings which do not need oiling, so that excess oil cannot get on the folding-rollers or the operator's hands.

See this firm's announcement, page 47.

LAMSON ENGINEERING CO. LTD., 132, Cheapside, London, E.C.2.

DISPATCH TUBES: system of steel tubing connecting any number of points (or stations); carriers for holding documents, small parts, etc., travel through tubes at high speed; Lamson turbine provides air-suction power. Double tubes between stations allow carriers to be sent and received at the same time. Push-button control supplied for operating systems of few stations but larger installations require continuous running plant. For inter-communication between many stations, carriers usually redirected at a central station. Central sorting can, however, be eliminated by an electrically operated switch system.

DOCUMENT CONVEYORS: Conveyor of "V" section, two sides being of hardwood or metal; bottom formed by continuous moving belt.

OVERHEAD WIRE CONVEYORS: hand and electrically operated lifts for use in offices and factories.

DESIGNERS AND CONSTRUCTORS OF: conveyor, hoist, chute, air-conditioning, ventilating, heating, dust collection, fume removal, etc., plants.

INDUSTRIAL VACUUM CLEANERS: portable machines for one, two or three operators.

Fixed plant, tubing radiates through floors and walls. Plants can accommodate any number of operators working simultaneously.

See announcement on page 69.

LIBRARY BUREAU LTD. (KARDEX DIVISION), 1 Leadenhall Street, London, E.C.3.

VISIBLE INDEXING and graphic control products of interest to all who want to establish an organization for dealing with stock, sales, accounts, production, etc., which will function with speed and certainty. Just now the anti-fire safecabinets of Kardex are of special interest.

Under your A.R.P. scheme workers must leave your offices for the shelters

(Continued on page 54)

"I was right—and I was wrong"

AN ACTUAL
CONVERSATION



Mr. E. H. C. Hilton, one
of the Remington machine
accounting specialists

Mr. L. A. Brown,
Secretary and Chief
Accountant of the
Marshall Tyre Co.,
Ltd.

"You will remember, Mr. Hilton, that when I accepted your offer to discuss our accounting system, I thought it was a good system—and I was right. I thought it could not be improved upon—and that's where I was wrong."

"Yes, I well remember that, Mr. Brown. You thought your business was not big enough for machine accounting."

"Well, like a great many others, I was under the impression that mechanisation was neither necessary nor economic for a business of moderate size. Quite an erroneous idea, of course, but I'm afraid I took a lot of convincing."

"What definite improvements can you point to as a result of installing Remington Accounting Machines?"

"A great many," replied Mr. Brown. "Now that we have reorganised our accounting system with your collaboration and help, we have complete control over our accounts. We get a day-by-day statement of debtors' position

right up to the minute—instead of once a month and weeks behind. We know at any given moment the total of outstanding balances on our books. Customers' statements are sent out promptly each month. All this has resulted in an enormous saving of time, and it has enabled many members of our staff to devote their whole attention to the job of selling."

This is only one instance where collaboration between an executive and a Remington specialist has had excellent results. This sort of thing is happening every day, in every branch of accounting—Invoicing, Ledger Posting and Statements, Cash Books, Cheque and Receipt writing, Stores and Costing, Analysis and Wages, etc.

We will be pleased to let you have specimens of completed forms showing how the accounting machine accomplishes its results. (Or, better still, call us in—if our specialist does not feel that machine accounting will be of definite advantage to you, we will tell you so.)

REMINGTON ACCOUNTING MACHINES

100 GRACECHURCH STREET, LONDON, E.C.3 ('Phone: MANSion House 3333)

Branches in all principal cities

How The Semi-Trailer Vehicle Can Cut Down Transport Costs



This vehicle combines the standard Bedford chassis, fitted with the Scammell patented automatic coupling and a Scammell-built trailer

By R. TWELVETREES, A.M.I., Mech.E.

THE new Bedford-Scammell articulated six-wheelers now available for 6 and 8 ton pay-loads have created widespread interest in commercial circles. This is particularly because they place semi-trailer haulage on an established basis in place of a compromise effected by adaptations.

If we consider the matter of unladen weight alone, the Bedford-Scammell is one of the most efficient forms of industrial motor vehicle on the market to-day. The larger model, with a payload capacity of 8 tons, weighs from 3 to 3½ tons only, according to the type of trailer employed. It is thus economical in taxation charges.

There is Considerable Saving in First Cost

The vehicle combines the standard Bedford chassis, fitted with the Scammell patented automatic coupling and a Scammell built semi-trailer. It measures 18 ft. long by 7 ft. wide, and costs £566. This compares with about £850, the average price for a good maximum capacity four-wheeled truck, fully equipped for road service.

Taxation for the Bedford-Scammell is between £35 and £50, depending upon the class of trailer. This compares with £70 to £90 for a 6/8 ton lorry.

In fuel consumption the articulated six-wheeler shows slightly better results under full load conditions, but the improvement becomes more marked when haulage is effected with varying loads. In such cases, of course, the lightweight Bedford-Scammell is much more economical.

You can calculate the ultimate cost of tyres from the purchase price of new equipment for the two types. About £80 is needed to fit a 6/8 tonner with new tyres; for the articulated six-wheeler the cost is no more than £60. It is safe to assume that the Bedford-Scammell is light on tyres. Even allowing for a tyre life of 20,000 miles for both types of vehicle, there is a clear saving of £30 on tyres.

By estimating all the costs and allowing for equal expenditure upon maintenance, you can budget on a saving of approximately £130 per annum by

using a Bedford-Scammell as a solo vehicle to carry 8-ton loads. Such economy can be obtained without recourse to habitual overloading. This, as every road transport manager knows, is a costly practice resulting in heavy maintenance and depreciation costs.

In usual standing charges one item comes prominently to notice when semi-trailer operation is contemplated. By reason of its full articulation, the six-wheeler enables its trailer units to be parked close together, almost anywhere, when not in use for carrying loads. It is ready to be hauled out from the most inaccessible places at a moment's notice.

Semi-trailer units can, if necessary, be parked in open yards without risk of damage. As it occupies but small floor space, the compact tractor unit can be housed in a little running-shed. Here quite a substantial economy can be effected. Big garage buildings, for instance, are expensive in rent, rates, heating, lighting, cleaning and other establishment charges. These costs are largely eliminated.

Work in congested areas and at terminal points where space for manoeuvring vehicles is restricted entails no difficulty. The Bedford-Scammell combination can turn in less than its own length. This flexibility will prove of

the utmost value to operators when loading and discharging at places where lack of room and vehicle congestion exists.

The commercial value of Bedford-Scammell operation is enhanced when one tractor is used in conjunction with additional trailer units. When working as a solo vehicle, the combination can deliver 8-ton loads over a distance of fifteen miles in about four hours. This is assuming, of course, that route conditions are normal and allowing ample time for discharging the load. Two journeys per working day can thus be done at economical rates. If, however, two additional trailer units are used with the one combination, under similar conditions six loads can be delivered in the same time.

Use of the two extra trailers will involve very little extra cost. One can be loaded at the collection point and the second unloaded at the destination while the third is worked between the two places.

This form of operation is made practicable by use of the Scammell turntable and automatic coupling device attached to the Bedford tractor chassis. The forward portion of the semi-trailer unit has a turntable to which it attached a retractable under-carriage. This is provided with two wheels for the support of the trailer unit when disconnected from the tractor chassis.

Very Easy to Attach or Detach Trailer

A traverse oscillating beam, forming part of the turntable mechanism, has two small flanged wheels at its extremities. These are designed to engage with corresponding ramps or runways fixed to the tractor chassis. This has also shock absorbing buffers to reduce the impact at the moment of coupling.

As the tractor unit is reversed into the coupling position, a locking device comes automatically into action. It consists essentially of two steel claws engaging with rollers on the turntable oscillating beam. By this means the two portions of the combination are secured firmly while permitting full articulation in all circumstances. A lever in the driver's cab is provided to

(Continued on page 71)

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This New Type Lighting Raises Output and Improves The Quality of Work

By E. DOUGLAS BOULT

Chief Engineer, G. H. HEATH & Co., Ltd.
Macclesfield

THE Factories Act has focused attention on factory lighting and its importance to the health of workers as well as to its influence on the quality and quantity of output. All these factors are, of course, interlocked and form a vital part of the problem of cutting down production costs.

To-day, thanks to the educative work done in recent years by the manufacturers of lighting equipment and by the specialized lighting engineers, the business man recognizes "lighting" for the exact science that it is.

Mercury Discharge Lamp the Basis of This System

Improvements in lighting equipment are constantly being introduced. One of the most recent is the Mercury Discharge lamp, a form of illumination that offers very particular advantages, especially for fine, intricate jobs.

In this class of work perhaps there is no better example than that of spinning and twisting silk threads. This involves the processing of threads as small as one five-hundredth of an inch in diameter. And the threads are of a colour so "natural" in the untinted form as to make it difficult to perceive them singly.

Now that women's silk stocking is so fine, the spinner or throwster who prepares the yarn spends all his time trapping and eliminating faults. Consequently the most efficient form of fac-

tory lighting is essential if the product is to be perfect before it is passed to the knitter.

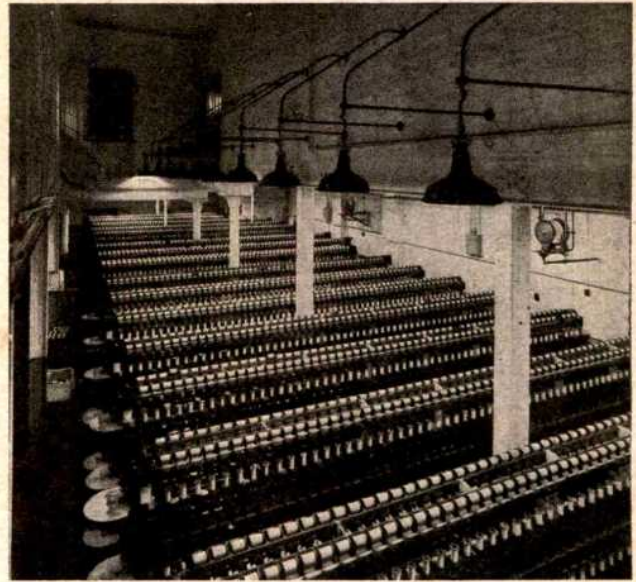
For this reason Heath's, of Macclesfield, largest silk throwsters in the country, and their associated company, British Crepe, Ltd., have always closely studied the illumination factor and were the first in their trade to see the possibilities of the Mercury Discharge lamp. Working in conjunction with specialists of the lamp manufacturers (Siemens Electric Lamps and Supplies, Ltd.), Heath's installed the M.D. lamps as soon as suitable types became available.

The illumination given by a discharge lamp has the peculiar property of picking out detail in clear-cut lines. It picks out the silk thread without any special background being provided. The thread appears more like a silver wire, standing out clearly in its path over the machines.

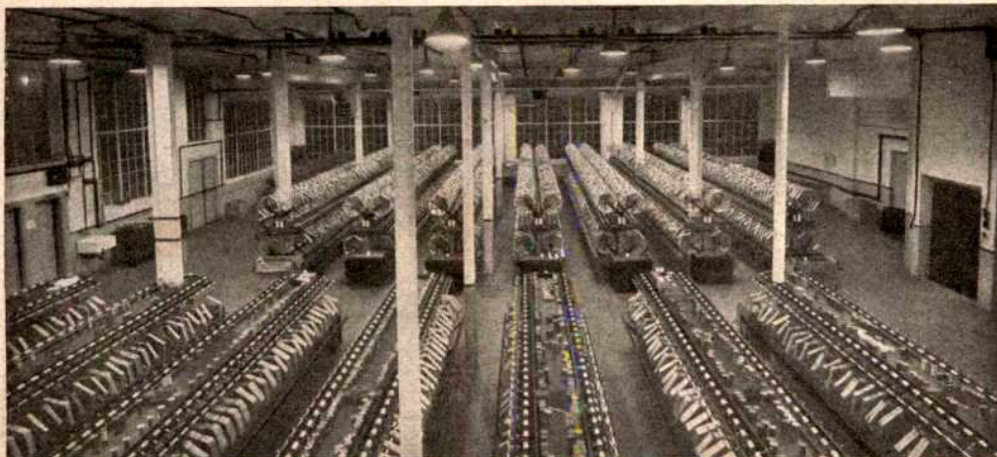
Owing to the absence of what techni-

cians call the "red element" in this type of light, its effect on colour is not the same as that of the ordinary gas-filled electric lamp. While it is not possible to carry out colour matching under the discharge light, yet the distinction of shades is, if anything, easier and more marked than under gas-filled lamp illumination.

The gas-filled lamp itself is, of course, not good for matching colours, but claims are made that the use of a certain proportion of gas-filled with Mercury Discharge lamps produces a light which is as near daylight as has yet been attained. Heath's, however, use no gas-filled lamps in their installations. They rely entirely on the "Q.H." or "Quartz" type lamp to give them what they require. They find that where no matching of colours is required the results are excellent. Distinction between various colours used for identification purposes



This photograph was taken with the aid of the standard artificial lighting only. The machinery was in full motion; the clearness of the definition therefore indicates what a short exposure the high lighting standard enabled the photographer to give



The illumination given by the discharge lamp has the peculiar property of picking out fine detail. In these silk winding operations, for example, the threads are revealed without any special background being provided. In fact, as Mr. Boulton puts it, "The silk thread stands out almost like a silver wire, showing clearly in its path over the machines." Note, also, how good is the general spread of illumination: no shadows

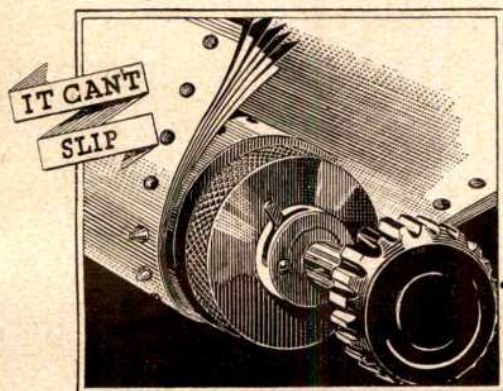
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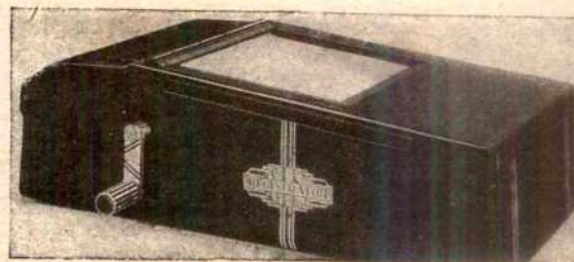


ILLUSTRATION SHOWS. DESK MODEL REGISTRATOR

is easy, however, despite the fact that those colours do not show up in their true daylight shades.

In planning the lighting schemes, Heaths had to consider points which do not crop up with ordinary gas-filled lamps. For instance, the discharge lamp, working as it does on A.C. circuit, is liable to produce stroboscopic effects when illuminating rooms in which machinery is running. This means that where machine revolution speeds coincide with the cycles per second of the electric supply, or their multiples, the lamps can give the illusion that the revolving part is stationary. Possibility of trouble in this respect was eliminated by Heath's engineers after experiments in the various rooms under differing conditions. Stroboscopic effect is therefore entirely absent in workrooms lit in this way—a matter of vital importance in a works where the greatest part of the machinery consists of revolving spindles and shafts whose accuracy of

speed is essential.

Silk-spinning machines are often 6 feet high and very close together. This complicated the difficulties of providing shadow-free lighting. Much experiment and careful planning was necessary. In many cases, too, the height of the rooms varied. There were even different ceiling heights in the same room—varying from 10 to over 20 feet. All these factors made difficult the provision of *even* light distribution. The position of the various units had to be decided by experiment.

Results, however, have shown increased efficiency, an outstanding achievement in a works where quality is of first importance and where working conditions and organization were already first class. The improvement, also, in comfort to the workers' eyes and the ease of fault detection have, say the executives, more than justified the expense and trouble involved.

Apart from the quality of light and

effective life given by the "Q.H." lamps, it is a point of interest to note that the manufacturers are now producing these lamps in small sizes, compared with those previously available. The sizes used by Heaths are 125 watt and 80 watt—according to area and height of the rooms.

One of the advantages of this type of lamp is the economy of its running cost. A lamp consumes only about one-third of the current used by a gas-filled lamp of equal illumination.

At Heath's Middlewich factory there is a room lit by 6.7 kw. of Sieray discharge lighting, giving approximately 13/15 foot candles' lighting intensity. The same room lit by gas-filled lamps would have required 14.5 kw. to give an average lighting intensity of only 7 to 8 foot candles. Obviously, where maximum demand is charged at so much per kw. per annum, the saving in cost is considerable, because the unit consumption is down to half as well as the maximum demand.

How You Can Put a Crimp In Your Electric Power Bill . . .

From JOHNSON and PHILLIPS LTD. . .

WHILE electricity problems are the specialist's job, the advantages to be won from the correct application of electric power directly concern the management. Much money can be saved through economic electrical distribution. And the chances for constructive cost-cutting is often overlooked here.

Power factor correction is now a recognized method of reducing overhead charges. In addition, when the electrical condition has been improved, existing cables, transformers and switchgear can be operated at an increased loading. This saves the cost of additional units when extension of plant is necessary.

Fig. 1 is an instance of economies made by a factory with an improved power-factor.

In considering power-factor correction it is first of all necessary to define the term "power-factor," which occurs in the measurement of electrical power.

In dealing with and measuring electricity, there are two aspects to consider: (1) electrical pressure, measured in volts, which corresponds roughly with pounds per square inch when considering water; (2) quantity of electricity flowing, measured in amperes, corresponding roughly with quantity of water measured in gallons per minute. The energy or power of doing useful work depends on both pressure and quantity.

In the early days electrical power was

supplied and used on the direct current system. When this system of supply is used, power can be determined by measurement of the electrical pressure in volts and the electrical current in amperes. The produce of these two quantities is the power in watts. The power can also be measured directly by means of watt-meters.

When electrical power was supplied by the alternating current system, it was found that the product of the applied voltage and the current did not necessarily give the power in watts. It was necessary to multiply the product of volts and amperes (known as voltamperes—symbol VA) by a constant always less than unity, which for obvious reasons is known as the "power-factor."

Here Is a Concrete Example

Certain types of apparatus, such as filament lamps, electric heaters and resistances have power-factors of 1.0, but most electric motors and certain types of electric furnaces have power-factors of less than 1.0. This is due to the effect of inductance and is inherent. A power-factor of 1.0 can only be obtained by the use of special corrective apparatus. This may be incorporated in the motor in certain special cases or by extra apparatus such as a static condenser.

Let us consider a factory using elec-



trical power requiring, say, 100 h.p. to carry out the necessary manufacturing processes. Assume an efficiency of 80 per cent—therefore, the electrical power input required will be $\frac{100}{0.8}$ —125 h.p. This can be expressed

in watts as 125×746 , 746 watts being equal to 1 h.p. By using the practical unit for measuring the electrical power in kilowatts (1000 watts), this becomes $\frac{125 \times 746}{1000} = 93.2$ kW.

Assuming a 400 volt supply and a power-factor of 1.0 due to the use of correcting plant, the products of volts and amperes is $\frac{93200}{1} = 93200$ AV. Or again using the practical unit kVA (1000VA) = 93.2 kVA, the current is given by $\frac{93200}{400} = 233$ amps.

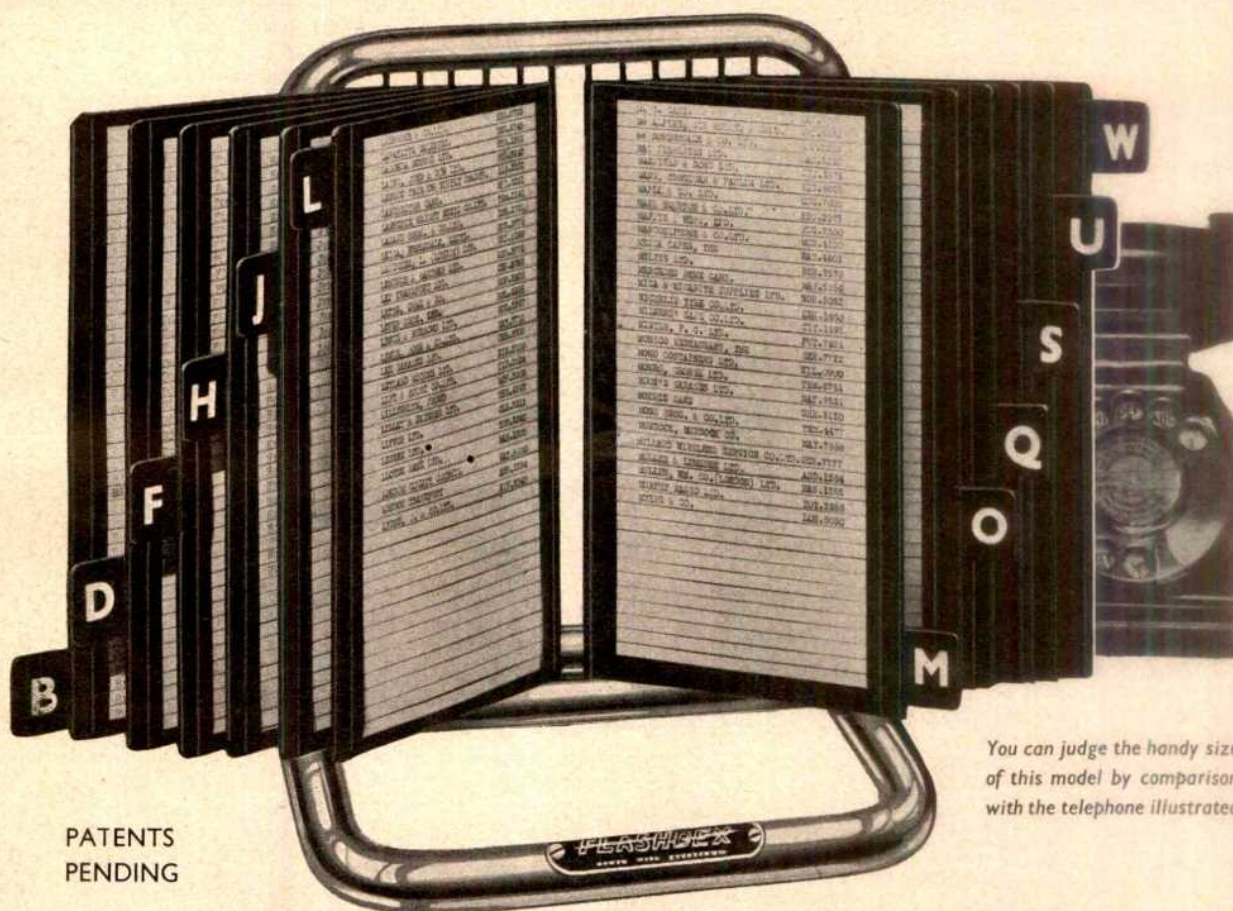
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In actual practice it is not uncommon to find a power-factor of 0.7 and then the corresponding load is $\frac{93.2}{0.7} = 133$ kVA and the current becomes $\frac{133000}{400} = 332$ amps.

The size of cables, transformers, generating plant, etc., is determined, not by the actual power used but by

stallation of static condensers. In the particular case quoted, the capacity of condensers required would be 95kVAR. In practice it is not usually convenient to improve to 1.0.

The accompanying table (Fig. 2) indicates the savings that can be effected, the condenser capacity required and the approximate cost for various values of corrected power-factor.

Actual power bill maximum demand charges before and after power factor improvement, with a load of 65 kW, were:

Before:
95.5 kVA @ 0.68 P.F. £429. 15. Od.

After:
68.6 kVA @ 0.95 P.F. £303. 5. Od.

Annual saving due to condenser £ 126. 10. Od.

Price of condenser, including control gear. £125. 0. Od.

Left: Fig. 1. Instance of economies made by a factory with improved power factor

Below: Fig. 2. Indicates savings that can be effected, condenser capacity required and approximate cost for various values of corrected power factor

Load kW	P.f.	kVA.	kVA M.D. Charge. £:s:d.	Condenser kVA	Redn in kVA	Saving £/kVA £:s:d	Cost of Condenser £; s. d.	Time to recover cost of condenser Months.
93.2	0.7.	133.0	532.0.0.	-	-	-	-	-
93.2.	0.9.	103.5	414.0.0.	50.5.	29.5.	118.0.0	113.0.0.	11½
93.2.	0.95.	98.0	392.0.0.	64.5.	35.0.	140.0.0	132.0.0.	11.3.
93.2.	0.975	95.6	382.8.0	73.0.	37.4.	149.12.0	140.0.0.	11½
93.2.	1.0	93.2.	372.16.0	95.0	39.8.	159.4.0	169.0.0.	12½

the current to be carried. In the second case, therefore, the size of cable, transformer, etc., nominally will be $\frac{332}{243} = 1.43$ times the original size.

Thus it follows that, although the same power or energy is supplied in both cases, the cost of supply will be greater in the second case because an increased value of plant has to be paid for. Supply companies frequently arrange their tariff to take account of this.

The 2-part tariff takes account of power-factor, including a fixed charge for kVA of maximum demand (the maximum load recorded in any given period, usually 15-30 minutes) and a charge for units (kW-hr).

If you take a common value of £4/kVA per annum and the above load figures as the maximum demand, you find that when the p.f. is 1.0, the fixed charge is $93.2 \times £4 = £372$ 16s. per annum. When the p.f. is 0.7, the fixed charge is $133 \times £4 = £532$. Thus, a saving of £159 4s. is effected by improving the p.f. from 0.7 to 1.0.

A very convenient method of improving the power-factor is by the in-

Some tariffs incorporate penalty and/or bonuses for low power-factor. For example, one corporation reverses the right to refuse to supply if power-factor is below 0.75 and gives discounts of 3 per cent and 5 per cent respectively for power-factors of 0.85 and 0.9 at maximum demand. Another allows a rebate of 10 per cent if the power-factor is not less than 0.95.

One power-factor clause is as follows: "A power-factor of 0.8 is specified with a penalty of ½ per cent of total bill for every 0.01 that power-factor is below 0.8, a further 10 per cent for a power-factor of 0.6 with a penalty of 1 per cent for every 0.01 below 0.6. If the power-factor is above 0.8, a bonus is allowed of ½ per cent for every 0.01 above 0.8."

Thus, with an original power-factor of 0.7, correction to 0.9 avoids penalty of 5 per cent and earns a bonus of 5 per cent, a total of 10 per cent of original account; correction to 0.95 avoids penalty to 5 per cent and earns bonus of 7½ per cent, a total of 12½ per cent of original account; correction to 0.975 avoids penalty of 5 per cent and earns

bonus of 8.75 per cent, a total of 13.75 per cent of original account; correction to 1.0 avoids penalty of 5 per cent and earns bonus of 10 per cent, a total of 15 per cent of original account.

Apart from the financial advantages gained by power-factor improvement directly from the supply company's tariff, it also has technical advantages. In the example considered, if the works were supplied through their own 100 kVA transformers, it would be impossible to carry the uncorrected load. It would be an excessive overload on the transformer. But by correction to 0.95 or over the load is brought within the capacity of the existing transformer. Thus a new unit need not be bought. Savings of this kind and through reduction of transformer and cable losses, together with advantages of reduced voltage drop in the works, are sound reasons for use of power-factor correction.

Technicalities of power-factor correction are, of course, of no interest to executives. There are specialist engineers to advise and consult on that aspect. But as a means to reduce overhead charges every manufacturer should investigate the possible economies in power-factor correction.

This Plan Eliminates Costly Verbal Instructions

By W. H., a Works Director

MOST executives know the difficulties of keeping track of verbal instructions issued by staff superiors and works managers. Orders of this kind give rise to many troubles. Chief of these I have found to be:

(1) mistake in ordering materials, (2) error in manufacture, (3) misunderstanding of requirements and resultant guessing, (4) dodging responsibilities, (5) delay in deliveries, (6) ill feeling among staff due to inability to place responsibility, (7) unnecessary worry caused to the super.

To cut out such worry, oversights, misunderstandings, lost time, money and bad temper, here is a simple plan which I have used with success.

All instructions and advices are jotted down by the manager on special pads consisting of 480 sheets in duplicate. The top green perforated sheet is for tear-off, the bottom white non-tear-off for taking a carbon copy of each note.

When an instruction is given, the green form is completed by the manager. It is then handed to an employee to do the job concerned. Upon completion he signs and dates the green form before returning it to the works manager's office. There a white duplicate is lined across diagonally to indicate completion of instruction. The green form is then filed for reference.

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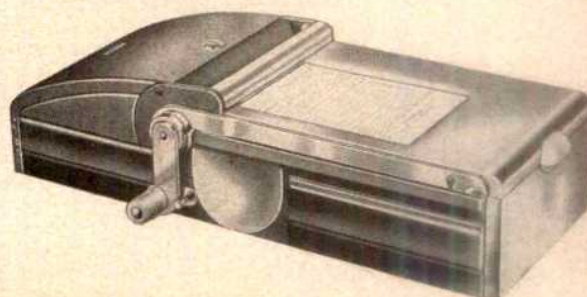
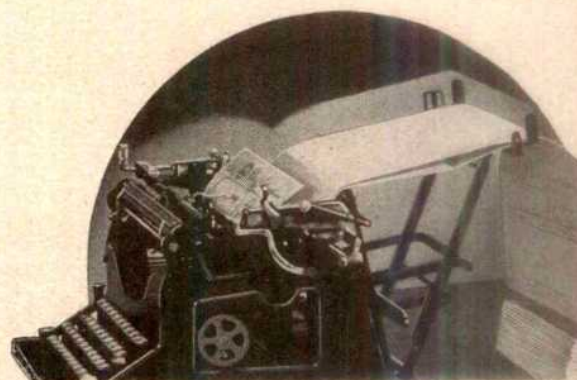
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Your Business Wants . . .

Safety-Zone Retreat Accommodation?

How to Secure it and What it will Cost

OF the firms which are not moving—lock, stock and barrel—from industrial "danger" zones out into the open country, many are arranging a safe retreat into rural areas for essential head office staff and their vital records.

Concerns that already have provincial and country branches have an advantage. They can, and are, planning to use one or more selected branches to receive the "refugee" head office in case of emergency.

Manufacturing firms, however, that have no outlying points of their own in which to "go to ground" are making use of another plan.

They are taking over large country houses—mansions in some cases—and are fitting these out as emergency retreats from which to operate.

Now it may sound easy, just to take a country house and to transfer your business thither. But it is not such a simple matter, after all. This thing must be gone at with careful thought and planning.

Size Rather than Location Governs Cost

Unless you are used to buying country houses, you will first of all want some idea of what they cost. That, naturally, depends on what accommodation you want. It does not matter so much *where* you want it, as country prices are not so competitive as those in the big cities and towns. But size of the property does make a difference.

To take a nice little mansion of, say, 40 rooms would cost, to buy outright, some £12,500. That, as a matter of fact, is an actual instance. A well-known firm has just bought a 40-room place for that sum. The location is only 30 miles outside London. That accounts for the figure seeming, perhaps, a bit high.

Generally speaking, though, prices for big places are pretty reasonable—and there are some real bargains to be had, as large country houses, as such, have been a drug on the market for a long time.

Smaller places, on the other hand, have not so fallen into disfavour. So do not be surprised if a country house of 20 rooms costs more than half the price of one with 40 rooms.

We saw some prices of houses with 20-24 rooms selling at round the £8,000 mark. But they, too, were within 30-35 miles of big towns. Farther out a good one could be got for £5,000.

It is not essential, though, to buy, even on a heavy mortgage.

One of the many types of country house available as emergency retreats for office headquarters. This particular one has been bought by a well-known business firm. It has 30 rooms and is 15 miles from London. The price was £7,000



More popular is the idea to rent. Within easy distance of London or a big centre a 20-room house costs about £250-£300 per annum for a 3-year lease. A 40-45-room house costs £500-£600 per annum.

These rents probably represent a slight rise over what they were a year ago because this A.R.P. emergency has very much stimulated the demand for these former "white elephants" on the estate agents' books. So if you are seriously thinking of taking up the country house idea, now is the time to get busy about it—before demand sends prices higher still.

Here is a plan, though, that is appealing strongly to smaller firms with but little capital available for their line of retreat:

Most of the leading estate agents can fix you up with a country house under an "option of entry." By this arrangement, for example, you can pay merely £100 or £150 per annum and have the right to settle in your selected property at twenty-four hours' notice.

This arrangement, like an ordinary lease, can be for three or more years, with the option to renew.

Under this plan you cannot, of course, go in and prepare the house beforehand. If and when you do have

to take up your "option of entry," owing to outbreak of actual hostilities, then you will have to equip and move in in something of a hurry. Moving in and getting things ship-shape may take a week—and under conditions of war. It is as well to remember that; otherwise this scheme has a lot to recommend it.

Now let us look at the additional expenditure involved if a house is leased or bought. There are three main factors:

(1) Running expenses; (2) Alterations to premises; (3) Equipment of premises.

Your country house must be kept in habitable condition, even if unoccupied. This means a caretaker may have to be employed, and possibly also someone to keep the grounds reasonably decent.

The house must be heated and there are also the normal repairs and maintenance.

The Maintenance Costs Have to be Considered

A medium-size mansion may run you into £10-£20 a month (in winter) for heating; while £50-£100 yearly will probably be demanded by repairs and maintenance. Local rates—an additional item—will vary very much, depending on the locality.

Alterations will depend on what work you need to carry out in the house when you have got it. If you only want it as a depository for business records, you will not be faced with much of a problem. But if you want to set out a duplicate of your big-city office and to bring down your work and staff, then there is quite a bit of careful planning in front of you.

Even if your aim is a compromise between these two limits and you want to make just an essential skeleton of full-scale organization, the need is just as great for a most carefully thought out plan.

You yourself will know, better than we could set down here, just what

(Continued on page 70)

How to Preserve Your Vital Records

Duplication of records, as a preliminary to their safe storage, is an important thing to consider. Modern equipment enables you to make these copies cheaply and at a rate of thousands per hour, while economizing enormously in space.

The various types of such copying equipment were specifically described in a special article on page 32 of BUSINESS for May last.

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These Products Help You to Meet the New Factory Act Demands

Factory and Workshop Heating

THE FACTORY ACT insists on the adequacy of heating and the elimination of all open fires in factories, workshops, foundries, etc.; therefore provision of modern stoves that meet the requirements of the Act, and at the same time ensure

out sideways, ensuring a wide distribution of heat.

Special thought has been given to preventing overheating and burning of the stove—the firebox is firebrick lined and the bottom section protected by a renewable baffle, while, above, the large air ports rapidly dissipate the heat.

TANGYES, LTD., Cornwall Works, Birmingham.

Paper Towels, And Why

UNDER THE FACTORIES ACT, 1937 (42), employers are obliged to supply what in simple terms amounts to a free towel service to all the workpeople employed. This indicates an increase in a form of overhead costs difficult to control.

The cost to the employer of providing

this free service is not controlled by the price at which he buys his towelling but by the number of towels used per person over any given period of time. For this reason it is essential that the towel service, once in full operation, should be of a type which eliminates waste and misuse of towels, thus enabling the employer to comply with the new Act at the lowest possible cost.

The Harcraft Controlled-Delivery Towel Cabinet has been designed for this specific purpose and enables the employer, whilst complying in all respects with the new Act, to ensure that this will be done in an economical manner to himself and in a completely sanitary and hygienic manner to the employee.

Vitally important, too, is that with the paper towel service the spread of infection (as possible by communal towels) is absolutely prevented.

HARCRAFT, LTD., Gipsy Corner, North Acton, London, W.3.

Overhead Radiant Heaters

A GREAT ADVANTAGE of radiant heat is the low air temperature at which comfort can be given owing to the rays actually warming the body or individual upon which they fall. This lower air temperature, compared with ordinary convection heating, means that comfortable conditions are attained more rapidly, and the degree of comfort reached is superior.

Floor level sources of radiant heat present obvious difficulties, such as the shielding of individuals by individuals, by furniture, machinery in factories, etc.

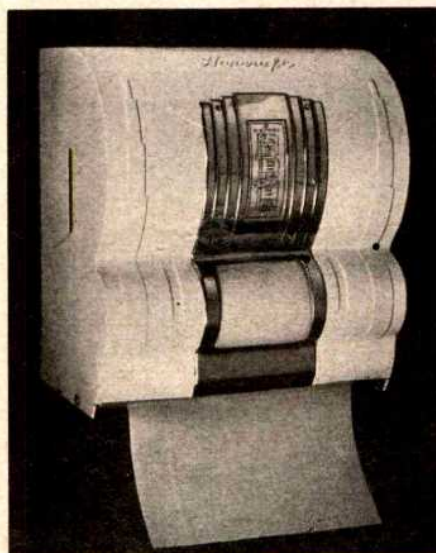
By placing the heater overhead these difficulties are overcome; a large building can be heated uniformly, or, if desired, part of the building can be heated locally. Again, no valuable floor space is taken up.

This quick heating-up, or the local heating of "cold spots," is valuable for maintaining temperatures of now legal standard.

BRATT, COLBRAN, LTD., 10 Mortimer Street, London, W.1.



Particularly high efficiency for low maintenance costs is claimed of this type stove



Paper towels are not only vastly more hygienic, but more convenient and cheaper, too, than the old textile towels

great economy in fuel consumption, will claim the interest of all works' managers and other responsible executives.

This firm was originally concerned with producing a stove for its own shops which should combine modest first cost, low fuel cost, wide dissipation of heat, with simple attendance and maintenance.

A feature which should justify the claim of fuel economy is the arrangement of passages for the hot gases which have a long travel with constant change of direction before escaping up the flue. Large ports through the stove arranged one above the other at right-angles, take air right through the flow of hot gases, which in their change of direction are flowing over all the surfaces of the air passages, whilst strong currents of warmed air flow

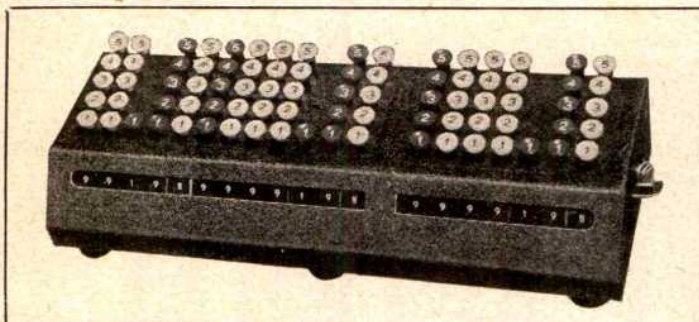


Note the high positions of these radiant heat units; no 'cold spots' here. Interesting explanatory booklet can be had from Bratt, Colbran Ltd., address above

**THERE IS NO INDIVIDUAL ADDING
PROBLEM THAT CANNOT BE HANDLED BY**

PLUS
MULTI-UNIT

Rapid ADDING MACHINES

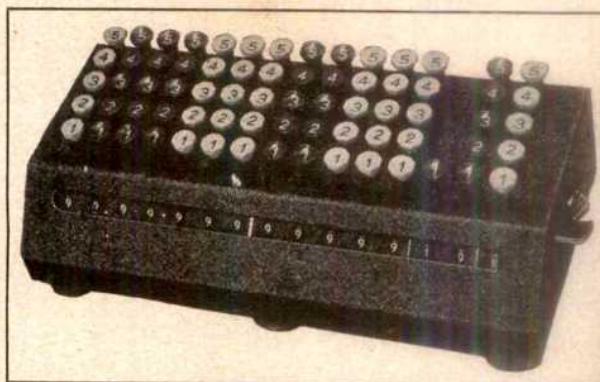


**3-REGISTER MACHINE
FOR ANALYSING BRANCH RETURNS**

This machine has been constructed for work where the totalling capacities required vary.

Capacity of each register : £99 19s. 11d./£9,999 19s. 11d./£9,999 19s. 11d.

● May we remind you that the MULTI-UNIT system of construction enables us to design a PLUS Model to suit your own particular analysis problem. Write for further details, or arrange for a demonstration in your own office.



STORES REQUISITION MACHINE

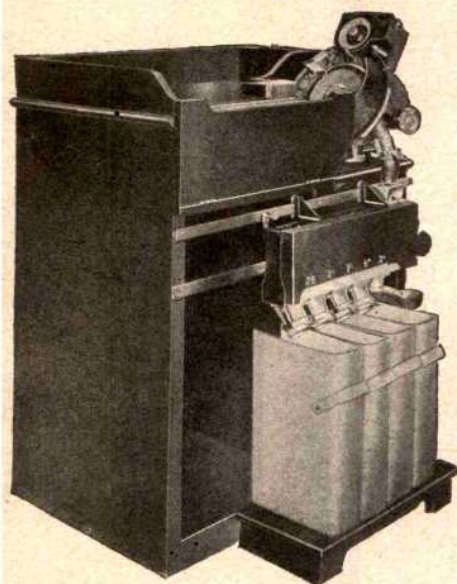
For the rapid addition of extended requisition slips showing number of parts and amount. By reason of the large keyboard capacity, these two totals of units and sterling can be carried simultaneously. Capacity : 9,999,999 / £99,999 19s. 11d.



BELL PUNCH Co., LTD.,
39, St. James's Street, London, S.W.1

Telephone: Regent 1532
Telegrams: Belpunch, Piccy, London

**Whatever large quantities of
coin must be handled—**



*the introduction of
this machine will*

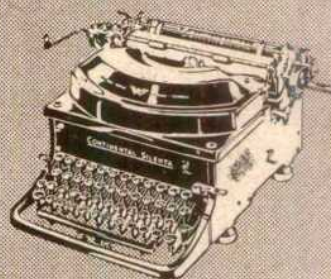
- 1 Save time.
- 2 Save labour.
- 3 Prevent any possibility of error or defalcation.
- 4 Eliminate disruption on certain days (such as wage-paying days) when an extraordinary amount of cash in coin has to be sorted or counted.
- 5 Automatically check and record in totals and sub-totals, as required, the amount of coin being handled.
- 6 Automatically stop the count if required at each £5 for breaking down a large sum of money into convenient units.

In short, there is practically no problem of coin-counting, sorting or bagging which this machine will not handle rapidly and without the fallibility of hand-operating. Its ultimate capacity is £1,200 per hour in bulk. It will last for years and years.

You can see this astonishing device in operation on **STAND No. 7** at the **BUSINESS EFFICIENCY EXHIBITION**, Olympia, Sept. 26—Oct. 5 or any time at our showrooms.

INTERNATIONAL COIN COUNTING MACHINE CO. LTD.
133-141 ROSEBERY AVENUE, LONDON, E.C.1

**SILENTA
TYPEWRITERS**



**WRITE SILENTLY
AND SAVE YOUR NERVES**
ASK FOR DEMONSTRATION AND FREE TRIAL

**CONTINENTAL
TYPEWRITER CO. LTD.**

97 QUEEN VICTORIA STREET, LONDON E.C.4
TELEPHONE: CENTRAL 8217/8

Safety Appliances

INDUSTRIAL GAS MASKS, fresh-air breathing apparatus, masks, goggles and hoods for dangerous work, life lines and rescue harness, protective clothing, etc. For 50 years this firm has studied the science of Safety for industry.

WALLASH BROS., LTD., 49 Tabernacle Street, London, E.C.2.

For Female Staffs

IT IS A GREAT boon to female staffs to have access to these necessities. The coin-in-the-slot machines are automatic



and need no attention beyond the usual cleaning and refilling. Incidentally, they show a cash profit of 37 per cent on the initial outlay. Most managements direct

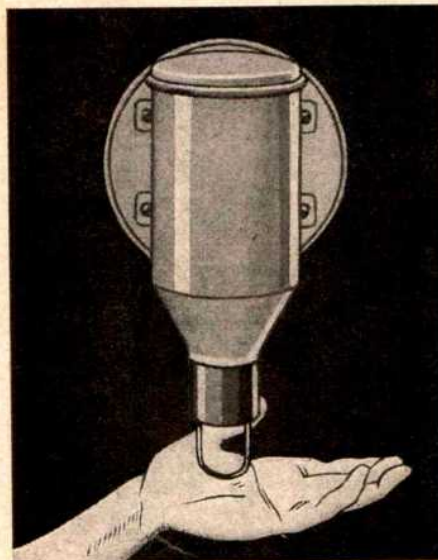
that this shall be paid back to the employees' canteen fund or similar object.

PETER'S AUTOMATIC MACHINES, LTD., 16 Victoria Street, London, S.W.1.

Soap Powder on Tap

THIS IS CLAIMED to be the first hand dispenser of powdered toilet soap. For use in the lavatories of business concerns the following advantages are claimed:

(1) It is more economical, giving 400



washes for one penny; (2) It is more convenient, no elusive pieces of soap to be picked up; (3) Being in powder form, the toilet soap will not splash or run through the fingers; (4) Pilfering impossible, as the device is locked; (5) Saving in time. You merely wet your hands and in one motion lift the plunger, which delivers an adequate supply of powdered toilet soap; (6) Less frequent filling, since the Savonette Dispenser holds 1,000 discharges.

The makers are willing to supply a free Dispenser on trial, from—

GOSPO, LTD., 14 Finsbury Circus, London, E.C.2.

For Your A.R.P. Organization

Blast and Blackout

IN DEALING WITH blackout the obscuration of light is not a difficult problem on the ordinary window. Any material which light cannot penetrate is effective, but, to take the problem one stage further, double precaution should be taken to protect the glass against blast.

Here difficulties are intensified, as in a bomb explosion all glass in the vicinity of the explosion is subject to danger from flying debris and to intense air compression, and the tendency is to blow the glass inwards. As the distance from the bomb site increases, this danger changes, and in place of compression suction takes place, which tends to draw the glass outwards.

Thus it becomes obvious that window protection should be on the outside. The material required must be weatherproof and must not buckle or lose its shape, otherwise light will be let through. It must be easily and quickly fixed, calling for a material which is virtually wood, so that it can be shaped, cut and fixed with

nails or screws. It must be possessed of a high tensile and transverse strength, so that compression and suction will not tear it from its fixings.

Standard "Presdwood" fulfils all these conditions. Details of "Presdwood" for this and many other purposes, from MASONITE, LTD., Bevis Marks House, London, E.C.3.

Preserves A.R.P. Clothing

OWING TO THE nature of protective equipment and the necessity of keeping it in perfect condition ready for immediate use, the provision of a foolproof method of storage is a problem which faces executives in charge of A.R.P.

The "Hyg-Gard-All" patented Hangers (A.R.P. type) provide an ideal system of maintaining oilskin suits, gloves, hoods and service respirators in perfect condition. They ensure that the special clothing is



hung unfolded and uncreased, thus preventing sticking and cracking.

JAMES SIEBER, Africa House, Kingsway, London, W.C.2.

Incendiary Bomb-Proof

INCENDIARY BOMBS aim at wholesale destruction by fire. By swift generation of fierce heat and flame they quickly destroy, eating through such material as steel practically on contact. Nothing can



prevent ignition of bombs that find their way into your buildings. What, then, is an effective precaution? It is to stop the passage of fire, to prevent spreading, to confine heat and flame to their source.

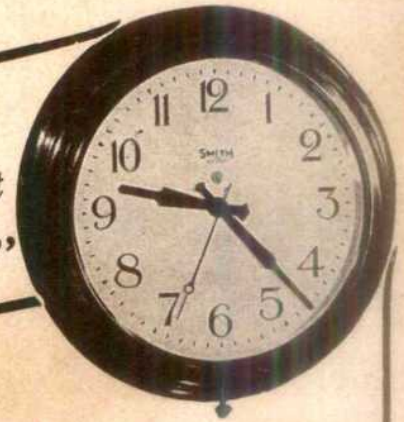
A material evolved for this purpose is "Kimoloboard."

Thermite and magnesium cannot burn through even a 1/4-inch Kimoloboard. Full details from—

CELLACTITE & BRITISH URALITE, LTD., Lincoln House, 296 High Holborn, London, W.C.1.



*"I give my employees good
clocks and can expect
them to keep good time"*



Truthfulness in a clock, as elsewhere, commands respect. Prove this by installing Smith "Sectric" Clocks, which are kept true to Greenwich by your A.C. mains, and note how their recognised accuracy promotes punctuality. Smith "Sectric" Clocks use only a shilling's worth of current a year each, need no winding or regulating, and definitely solve timekeeping problems.

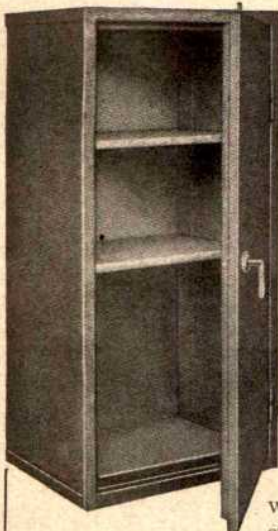
DAGENHAM — Wall clock fitted with centre seconds hands. Moulded case in Walnut/Mahogany finish or White. Black hands and figures. Overall dimensions: 13½ in.; Dial, 10 in. diam. 60/-.

SMITH SECTRIC CLOCKS

plug in to GREENWICH time

Issued by:
SMITHS' ENGLISH CLOCKS LIMITED
Cricklewood Works, London, N.W.2

Scientific



FIRE

*never destroyed
a document
stored in a*
'GUARDIAN'
SAFE CABINET!

The G.S.C.3
48x24x18 ins. (2 shelves)
£8 · 16 · 0
*Carriage paid in
England & Wales*

CATALOGUE FREE ON
REQUEST TO Dept. "B"

J. W.

TIMMS GUARDIAN SAFE WORKS
WOMBOURNE
NEAR WOLVERHAMPTON Wombourne 2277

We have proved by test the absolute safety of the "Guardian". In a furnace registering 1,310 degrees Fahr. we placed a model G.S.C.7 for 66 minutes until the heat reached a temperature of 1,454 degrees Fahr. THE INSIDE TEMPERATURE OF THE CABINET, AFTER TEST, SHOWED 218 degrees Fahr., which proved that as paper requires 300 degrees before dehydration a safety margin of 82 degrees was available. This practical test proves that for the storage of vital records, books and documents, the "Guardian" is your safest investment.

FOR A.R.P.—and general use—you need a "BRISTOL" NESTED FIRE BUCKET TANK

For every row of old-fashioned, cumbersome, and unwholesome fire-buckets ten 2-gallon buckets, resting in 34 gallons of clean water. Each bucket, as lifted, comes out filled. Ball-bearing castors enable the tank to be taken to the fire. Substitute a modern, neat, and hygienic BRISTOL Fire-Tank. Fitted with a stirrup-pump it can, for local fires, incendiary bombs, etc., replace a hose should the pipe-line or water-main be damaged by air raid. Approved by Fire Prevention Officers, Local Authorities, and Borough Engineers. Write, mentioning BUSINESS, for full details.



**ENGINEERING STORES
& SERVICES LTD.** ESSL WORKS, BRISTOL, 3

Manufacturers of Fire Appliances of all descriptions

(Phone: 63019, 2 lines. Grams: 63019)

London Office: Sentinel House, 46 Southampton Row, W.C.1. (Phone: HOL. 9200)

'BUSINESS' Annual Survey

(Continued from page 38)

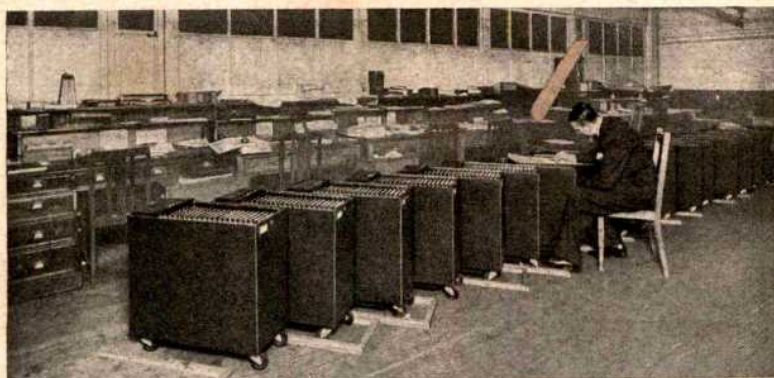
with maximum speed: what will happen to the stock records, sales ledgers, etc., on which they are working, loss of which might jeopardize the continuance of your business?

Kardex anti-fire Safe equipment gives certified fire protection at the point of use. One moment your operator is work-

compensate for extra copies or thickness of cards, etc.; lightness of touch not affected.

Complete visibility; extended line-finder enables operator easily to read work done; line-up judged from whole of printing on sheet.

DOUBLE BALANCE REGISTERS,



The new Kardex floor model cabinets are fast becoming adopted as, in addition to other advantages, they protect records at the point of use in case of emergency

ing on your records, the next moment she has heard the warning signal: with one swift movement she closes the unit on which she is working and your records are protected. No need to carry the records to a place of safety, they are actually worked upon in the specialized safe-container itself, yet maintaining all the factors of high speed reference and control.

Specimen safes are periodically tested, under rigorously scientific conditions, in public, by independent experts, in a specially built gas furnace where conditions worse than those likely to be encountered in practice are created.

In addition to anti-fire products, Kardex have produced, as a development of their Visible Record system familiar in cabinet form or book units, a new type of housing: the Floor Model (press-button selection). Also there is the well-known range of indexing equipment employing desk, wall, rotary stands, etc.

Recently Kardex have pioneered a range of graph panels and planners. Four types are at present available: the Horizontal Planner for Job and Machine Allocation, etc., the Vertical Planner for Production Planning, Contract Control, etc., the Colourgraph for obtaining direct visual comparison of related statistics, and the Slotted Chart, which is a flexible charting equipment adaptable to a wide range of charts, works progress lay-outs, space and programme bookings, etc.

See announcement on page 31.

MERCEDES STERLING BOOK-KEEPING & CALCULATING MACHINES LTD., Mercedes House, Thavies Inn, Holborn Circus, London, E.C.1.

STERLING BOOK-KEEPING AND CALCULATING MACHINES: accounting mechanism and typewriter section on all Mercedes machines operated by electric motor; touch is one-fortieth that of manual machine, irrespective of operator's characteristics; pressure gauge on front of machine can be altered when required to

obtainable on all models; common for monthly, progressive and turnover balances to be given in one line of work. On "B" class machine possible for registers to be used in variety of combinations, such as both sterling or both currency, one sterling and other currency, sterling and quantity or both quantity.

"B" CLASS GENERAL MODEL: adaptability enables model to be applied to almost all accounting requirements; from straightforward ledger posting, with two vertical totals and cross-adding mechanism, to columnar analysis extending over 25 or more headings.

"B" CLASS DOUBLE CARRIAGE MODEL: specially for stockbrokers' work such as contract notes; pay-roll; applications requiring simultaneous production of vertical docket with horizontal columnar analysis.

"B" CLASS CONTABIL MODEL: feed, spacing and ejection all automatic; irrespective of number of lines on previous form, up to certain maximum, machine will, upon completion of form, space up automatically to first writing point on following form.

CONTINUOUS FORM MACHINE: electrically operated keyboard; pressure gauge enables many copies to be taken at one typing without additional operative effort.

ELECTRIC TYPEWRITERS: claims 30 per cent more output at same labour cost, especially with continuous stationery, 20 carbon copies obtained in one operation.

STANDARD TYPEWRITER MODEL 6: automatic key-set tabulator; 90 character keyboard; individual touch control gives maximum comfort to operator at minimum cost; easily dismantled into three main parts (carriage type unit and frame), simplifying regular inspection and cleaning; carriage and type basket interchangeable.

"SELECTA" PORTABLE: dual-action; streamlined; four-bank standard keyboard; complete with case.

POPULAR PORTABLES: have standard

four-bank keyboard. Two models: "Prima" with single colour ribbon; "Superba" with two colour.

See announcement on page 2.

MILNERS SAFE CO., LTD., 12 & 13 Newgate St., London, E.C.1.

SAFES of every size, from smallest to complete strong-rooms.

FILING-CABINETS: complete range of filing- and record-card cabinets. Cabinets are built to give strength and are attractively finished with chromium fittings. In spite of their low price all drawers run on ball-bearing extension-slides; shelves are provided between drawers to prevent dust from settling.

DESKS AND TABLES: range of steel desks and tables includes all modern types.

STEEL CUPBOARDS: all types of hinged and sliding-door cupboards. Cupboards with roller-curtain fronts and glass doors; counter cupboards, filing cupboards.

LOCKERS: for one, two, four, or eight persons, Office wardrobes, Special Lockers for Swimming-baths, Bowls and Golf Clubs. Cupboard Lockers feature among the wide range offered by Milners at specially reduced prices for complete installations.

Among the other equipment manufactured by Milners, their Shutters, Shelving Partitioning and Strong-room Doors deserve special mention.

See announcement on Cover ii.

OZONAIR LTD., Longmore Street, London, S.W.1.

OZONIZER TYPES 128: for deodorizing, purifying, freshening atmosphere in offices, basements, lavatories, etc., up to 2,000 to 4,000 cu. ft. Power consumption about 5 watts; equivalent 200 hours working per unit. Three models: 128S (Standard); 128D (double strength); 128DR (with regulation for 4 strengths of Ozone).

DETACHABLE FAN FITTING: independent of ozone circuit. Power consumption 25 watts, equivalent 40 hours working per unit.

OZONIZER TYPES 31 AND 32: for offices, etc., up to 3,000 to 5,000 cu. ft. Complete with enclosed fan. Power consumption 25 to 30 watts, or 30 to 40 hours working per unit.

PUNKAH CEILING OZONIZER: for spaces of 4,000 to 6,000 cubic feet; power-consumption 110 to 130 watts. Standard blades have 44-in. sweep.

CEILING OZONIZER: similar to Punkah model but without fan.

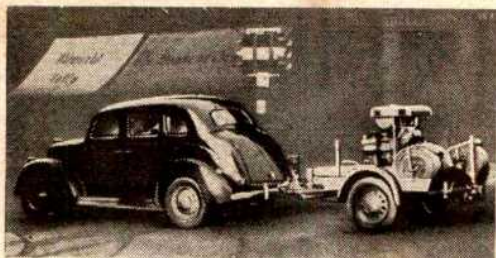
PORTABLE APPARATUS: for refrigerated stores, general purposes. Consists of ozonizer, fan and step-up regulating transformer. Converter supplied for D.C. Three sizes: T.N.15 and 16 for 10,000 cu. ft. spaces; T.N. 17 and 18 for 20,000 cu. ft. spaces; T.N.19 and 20 for 40,000 cu. ft. spaces.

AIR-CONDITIONING APPARATUS: humidifiers; acts as purifier, cleans air of solid matter. Two sizes: H.1. for spaces about 2,000 to 3,000 cu. ft.; H.2 for spaces about three times that of H.1.

AIR-CONDITIONING UNITS: for heating, cooling, humidifying, de-humidifying, cleaning and purifying. Silent-running fan; Ventex filter; Ozonair apparatus; power consumption about 120 watts.

INDUSTRIAL APPARATUS: purifies, invigorates atmosphere in factories, warehouses, etc. Standard size capacity: 6,000 to 8,000 cu. ft. Power consumption, 80 to 100 watts.

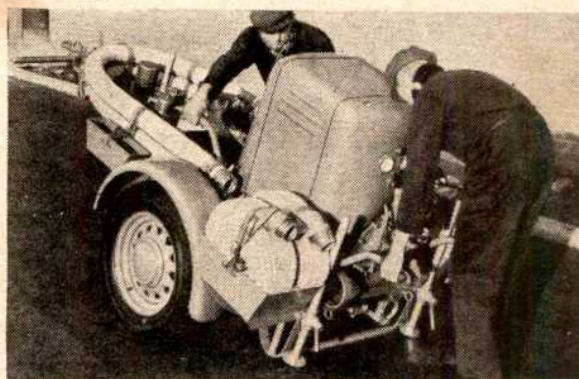
See this firm's announcement, page 7.



FIGHT FIRE

with the finest and quickest-into-action
trailer pump

A light car, a simple trailer, a Sigmund Pump and there you have an efficient, mobile Fire Brigade which can be operated by two men. The Sigma Pump weighs only 430 lbs.; it can be easily wheeled over rough ground or obstacles by one man and yet is sufficiently powerful to throw two jets 80 ft. high (alternatively four jets can be played), and to deliver water at the rate of 180 gallons per minute. The Sigma Fire Trailer Pump is used by Fire Brigades and for A. R. P. duties and has been approved by the Fire Brigades Division of the Home Office after exhaustive and comparative tests. Official approval of Sigma Pumps is amply



demonstrated by recent Home Office orders for 3,500 of these pumps, and by the fact that Sigmund equipment is now used by over 200 Fire Brigades.

*For full particulars and catalogue of Sigmund
Fire Appliances send a post card to:—*

SIGMUND PUMPS

Sigmund Pumps (Great Britain) Ltd. Works: Kingsway, Team Valley, Gateshead-on-Tyne 11
Tel.: Low Fell 76030. London Office: Bush House, London, W.C.2. Tel.: Temple Ba 6296-7



**HAVE WHAT YOU
PAY FOR...**

Q. What is it I pay for and yet don't have? A. A Time Recorder. Q. How is that? A. Without one there is much waste of time and effort which means loss of money. Q. If I have one what difference will it make? A. You pay for it with the money saved by making every working minute productive. Q. What system shall I install? A. The best of course. That means GLEDHILL-BROOK. It is British and just the thing for your business.

Gledhill-Brook

Write for copy of new book "Time Means Money"

GLEDHILL-BROOK TIME RECORDERS Ltd.
38 EMPIRE WORKS HUDDERSFIELD

BAR-LOCK

**EXHIBITS ON STAND
NO 75**



BY APPOINTMENT
TO THE LATE
KING GEORGE V.

BAR-LOCK STANDARD MACHINES
BAR-LOCK 4-BANK PORTABLE
BAR-LET MODEL 2
STEEL EQUIPMENT

BAR-LOCK TYPEWRITER Co., Barlock Works,
Nottingham, England.
Grams: Barlock, Nottingham. Phone: 51741/2.

**BUSINESS EFFICIENCY
EXHIBITION**

NATIONAL ACCOUNTING & BOOKKEEPING MACHINES (Products of The National Cash Register Co., Ltd.), 206-216, Marylebone Road, London, N.W.1.

CLASS 3000 ACCOUNTING MACHINE: a one-machine installation in which a single high-class accounting machine will do an all-round job is often the only practical proposition for the smaller firm where the time spent on any one job is never sufficient justification of itself for the purchase of a machine. Therefore, a machine which can be adapted to function at a moment's notice on any job must merit a great deal of attention from the smaller concerns.

This same flexibility which is vital in a one-machine job also has advantages for the larger concern having several machines because, owing to interchangeability of the machine, peak loads can be tackled by temporarily turning the whole battery of machines over to the one job. An instance of this is the Payroll. For the first part of the week the machines are variously engaged on routine book-keeping, but when the Payroll has to be done all machines can be converted into Payroll machines inside half a minute.

This flexible type of machine combines five important features: full adding-machine keyboard, typewriter, complete and constant visibility of work, flexibility of operation and automatic functioning to a high degree.

CLASS 2000 ACCOUNTING MACHINE: for specialized work where a machine can be employed fully on one job, the National Cash Register Co. markets a variety of high-speed machines, the 2000 Class range.

Space permits only a brief description of one of the most interesting of these. The National Dividend writing-machine will print Warrant and List simultaneously in original ribbon print without the use of carbons or a tabulating carriage. The provision of a separate printing mechanism for every column on the form cuts out the need for a cycling carriage and thus saves the time required for tabulation. The original ribbon print produces clear records and saves carbon paper expense and the time taken to load them. Warrants are just laid on a flat table—not even aligned in any way. The first operation of the machine, which is the printing of the amount of the Holdings, inserts the Warrant into the machine, lines it automatically and prints the Holding on Advice portion and List. The recording of the dividend and tax is then made, again printing on Advice and List. Upon the depression of the "net dividend" key the machine automatically computes the total, prints it on the Advice section of the Warrant, again on the cheque (on this part of the Warrant it prints also in *full words as well as figures*) prints it on the List, ejects the Warrant from the machine and neatly stacks it on a table provided underneath. The operator has no handling of forms other than the initial placing of the Warrant on the table. It is mechanically impossible for the amount in figures to disagree with the amount in words and no subsequent protectographing operation is necessary.

Special machines are also available for all types of billing work, ledger-posting, analysis, receipting and remittance control, hire-purchase, etc.

See announcement on page 4.

NATIONAL TIME RECORDER CO., LTD., Aquinas Street, Stamford Street, London, S.E.1.

NATIONAL PATENT ELECTRIC Transmitting Master Clock, Time Recorder, Dials and Siren: this is the complete all-electric time hook-up for the modern business organization. Controlled time at every point; time recording by employees synchronizing with every clock, and the works siren automatically looked after by the same controlled circuit.

ELECTRIC, METAL CASE RECORDER: all-mains model, automatic, prints in one or two colours.

FULLY AUTOMATIC CARD RECORDER: "In" and "Out" column selector entirely automatic. Check action device. Two-colour ribbon prints irregular times in red.

"CLIPIT" RECORDER: allows unlimited recordings per day or week. Suitable for shift workers and irregular timers.

SUPER-AUTOMATIC "CLIPIT": no operation necessary beyond placing card in receiver.

"LIGHT MODEL" RECORDER: prints day, hour and minute; suitable for smaller employers.

"Universal Portable" Job Timing Recorders, Automatic Time Stamps, Key Time Recorders, etc.

POWERS - SAMAS ACCOUNTING MACHINES LTD., Powers - Samas House, Holborn Bars, London, E.C.1.

Three very important developments have been made. They are: (1) The Powers Transcriber, (2) The Powers Inter-

1940 LOOMS AHEAD

BOOM or TENSION!

Who knows?



Nevertheless the masses will continue to live, eat, drink and have their being and likewise will continue to buy your goods if brought prominently to their notice at the RIGHT TIME.

Before you complete your 1940 appropriation plans you should, for your own advantage, acquaint yourself with the services available and the functions performed by air publicity.

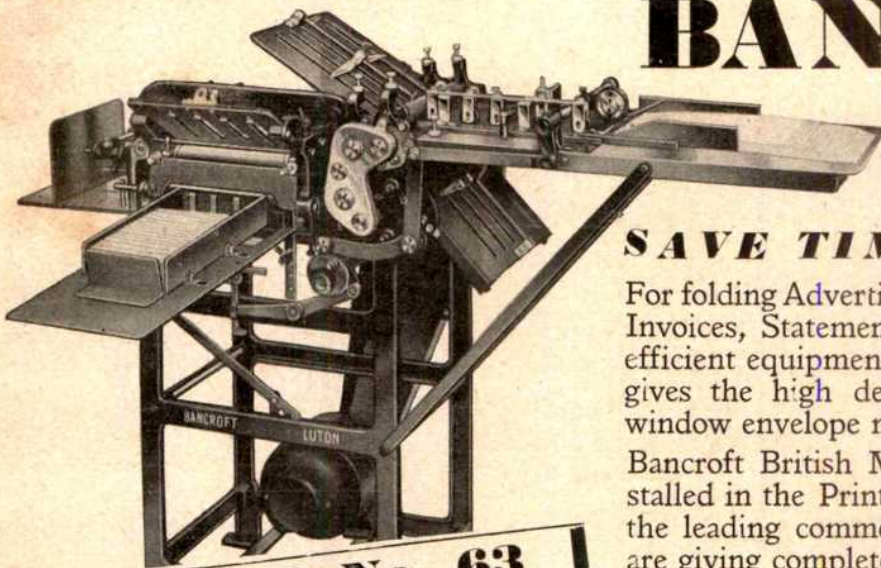
Do not be guided by theory when our five years' knowledge and experience is at your disposal, without obligation of course.

Write or telephone, and our Managing Director will be pleased to discuss details.

AIR PUBLICITY LIMITED

11 BUCKINGHAM STREET, LONDON, W.C. 2 • TELEPHONE: TEMPLE BAR 0058

20 TIMES FASTER - -



BANCROFT

Supreme OFFICE
FOLDING MACHINES

SAVE TIME AND MONEY

For folding Advertising Literature, Circular Letters, Invoices, Statements, etc., "Bancroft" is the most efficient equipment. Automatic sheet registration gives the high degree of accuracy necessary for window envelope mailing.

Bancroft British Made Folding Machines are installed in the Printing and Mailing departments of the leading commercial and industrial houses and are giving complete satisfaction.

STAND No. 63
BUSINESS EFFICIENCY
EXHIBITION
NATIONAL HALL
OLYMPIA

26th SEPT. - 6th. OCT. 1939

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KAYE'S ROTAPRINT AGENCY LTD.

CECIL HOUSE, HOLBORN VIADUCT, LONDON, E.C.1

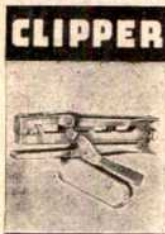
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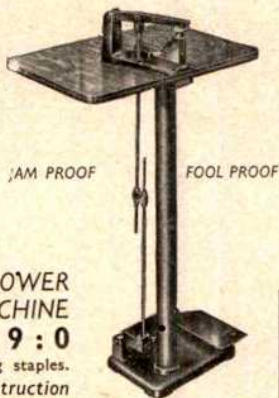
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Business Efficiency
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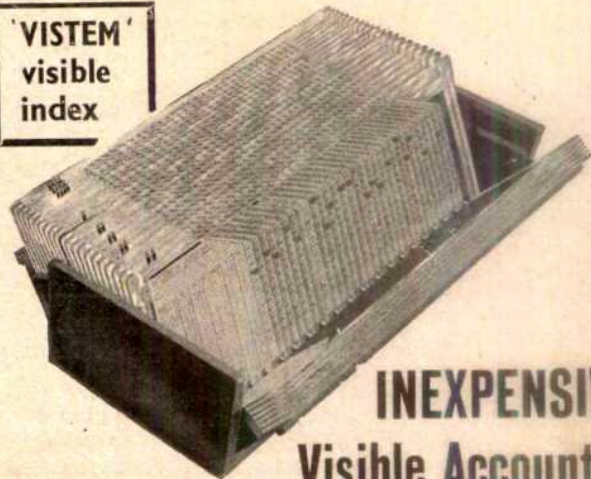
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"Vistem" Visible Indexing introduces to this country a system that improves greatly on any other method—and at the same time is relatively inexpensive. Nothing half so efficient has ever been offered before at the price. It is completely elastic, allowing single cards or batches to be inserted with utmost simplicity; it occupies only half the floor space of many visible indexes; and it can be used for straight visible jobs as well as machine posting. Although new to this country, "VISTEM" has been extensively tried out on the Continent. It is now being manufactured entirely in England. Write or 'phone Abbey 3675 for details NOW.

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polator, and (3) The New Powers-Samas Tabulator.

POWERS TRANSCRIBER: Success of the Powers Numeralpha Interpreter, introduced about two years ago, has established beyond question that with many types of work a complete printed record on the punched card itself considerably extends the value of the Powers system; and there are now numerous installations using interpreted cards in various ways, such as for checking; as visible files; or as instruction cards, bonus notices, etc. etc.

This feature of interpretation, i.e., printing on the punched card of the data represented by the perforations in it has proved so valuable that there has arisen increasing demand for an interpreting machine which can be used economically in cases where the volume of work does

not justify the use of the standard Numeralpha Interpreter.

The Powers Transcriber has been introduced to meet this demand. It is a compact, self-contained machine which operates differently from the standard Interpreter; the main difference being that, whereas the large machine senses the card as a whole, and prints the interpretation of the whole card in one stroke, the new Transcriber senses and prints column by column, typing the characters along the top edge of the card like an automatic typewriter.

The Powers Transcriber is entirely automatic and operates at a high speed, the Powers-Samas model maintaining an output of 750 to 850 cards per hour. It will, of course, be realized that, while the principle employed in this machine has reduced

its cost in comparison with the standard model, it has also affected its interpreting capabilities. For example, with the standard Interpreter certain columns can be arranged to print months; others can have special type of various kinds, and the interpretation of a column need not necessarily be printed exactly above that column. With the Transcriber such variations are not possible, as the same type unit is used for all columns. Notwithstanding these limitations, however, there are many Powers installations where such a machine can be of great assistance.

POWERS INTERPOLATOR: Designed for automatically checking, comparing and intermingling or separating two separate packs of punched cards according to agreement or disagreement of particular designations punched in them. It combines the largest range of functions possible with this remarkable type of punched card machine.

For example, it will insert "balance" cards in their correct order with their respective "movement" cards and at the same time segregate all "balance" cards for which there are no "movement" cards: it will insert the cards of one pack in correct numerical sequence in another pack of cards in order to make one complete pack; it will compare two packs of cards and sort out into two boxes the cards which agree, depositing into two other boxes the cards which do not agree; it will remove certain cards from a pack and at the same time automatically insert new cards in their place. These and numerous other operations are possible with this machine; all of them being performed without any special perforations in the cards or any arrangement other than the prior sorting of all cards into numerical order.

The sensing mechanisms are constructed to operate over six adjacent columns and are movable to cover any portion of the card. Thus it is possible to compare one field on one pack of cards with an entirely different field on the other pack. Moreover, the machine is constructed to deal with over-punching so that alphabetical designations can be compared as well as numerical.

On most classes of work the machine will deliver 200 cards per minute into the various card receivers, but on certain very simple intermingling work as many as 400 cards per minute can be delivered.

NEW POWERS-SAMAS TABULATOR: This new machine is the outcome of continuous work on the part of the Powers special research and development factory at Croydon and embodies new and valuable features of far-reaching importance in accounting work.

Capacity of the machine has been augmented in three ways:

1. Framework of machine has been redesigned and will now accommodate every possible combination of units, giving a total available range up to 105 sectors, any of which can be additive and can carry grand total units.

2. New Numeralpha Unit with capacity of 40 sectors has been made available. This provides for 40 columns of complete alpha-numerical information in one group of sectors and only occupies the space previously taken by three units of ten sectors each.

3. A special Double Sensing Mechanism has been incorporated which causes the machine, when required, to sense the same card twice. This enables the Tabulator to print and if necessary add twice the normal amount of information from cards in which this information has been punched in a suitable manner. Thus 130 columns of information can be recorded in a standard 65-column card, and if necessary all

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the information can be alpha-numerical. [Space here is not nearly sufficient for an adequate description of these three Powers-Samas developments. It is hoped soon to devote a complete article to this purpose.—Ed.]

See announcement on page 33.

REMINGTON ACCOUNTING MACHINES, 100, Gracechurch Street, London, E.C.3.

REMINGTON MODEL NO. 20: a type-writer especially for accounting work. Even the smallest business can use this machine for statements, ledger posting, receipts, cash book and a variety of other work. Front and back feed, electric carriage return, if desired: date-printing key and many other features.

REMINGTON MODEL NO. 86 ALL-ELECTRIC DUAL CROSS ACCOUNTING MACHINE: latest of the Remington Accounting Machine range, for a variety of accounting work. Used in many businesses for sales ledger posting with statements, bought ledger posting with analysis, costing, wages sheets, stores records and so on. Operation is all-electric. Equipment includes two cross-computing registers in addition to vertical-computing registers for totalling any column.

REMINGTON MODEL NO. 84 ALL-ELECTRIC SINGLE CROSS-ACCOUNTING MACHINE: similar to Model No. 86; only difference it has one cross-computing register.

REMINGTON MODEL NO. 82 ALL-ELECTRIC FANFOLD MACHINE: used extensively for invoicing and work where a number of carbon copies is required. Combines features such as automatic insertion of carbons between the forms of each set, continuous feed of forms, automatic totalling of each invoice and cumulative total of all invoices. All-electric operation. Importance of electric keyboard for work of this kind lies in the fact that every impression made by a character or figure is clear on all copies, and is independent of touch of the operator.



The Remington all-electric Fanfold Billing

REMINGTON MODEL NO. 80 ALL-ELECTRIC FANFOLD BILLING MACHINE: used when automatic totalling not required.

REMINGTON MODEL NO. 16 FANFOLD BILLING MACHINE: manual model Fanfold Machine which can, if desired, be equipped with electric carriage return. Automatic insertion of carbons and feeding of forms.

REMINGTON MODEL NO. 82 ALL-ELECTRIC VERTICAL ACCOUNTING MACHINE: a model that will be on view

at the Exhibition is specifically adapted for cheque and receipt writing with cash books and other forms where required.

REMINGTON MODEL NO. 124 SINGLE CROSS-ACCOUNTING MACHINE: manual keyboard and electric carriage return. Carries out same accounting work as Model No. 84 referred to. Can be equipped with large number of adding registers, this being limited only by the length of carriage.

REMINGTON MODEL NO. 122 VERTICAL ACCOUNTING MACHINE: for any work where vertical totals are required in combination with typing, as in invoicing.

DALTON ADDING AND LISTING MACHINE: Dalton range of adding and listing machines has many excellent features. This is a small keyboard machine with key-locking device for control over accurate operation. Electric motor can be fitted any time.

TYPEWRITERS: Noiseless Portable.



The Remington Noiseless Portable

88-character keyboard; all operating features of Remington Noiseless Standard.

Rand Portable: with new short-type bar action with star-wheel escapement; complete in all features.

Streamline No. 5T: made in Canada. Has every feature of the standard machine in compact, portable form.

Streamline No. 5: similar to above but with five-space paragraph key in place of complete tabulator.

Remette: made in Canada. Standard keyboard and all essential operating features of standard model.

Remington Noiseless Standard: made in Canada. Is equipped with every known up-to-date device. Patented noiseless action.

RIKARBON COMPANY LTD., 28 Victoria Street, London, S.W.1.

SPECIALISTS IN SERVICES FOR TYPEWRITERS: precision rebuilders of all makes of typewriters. Speciality: realigning type bars.

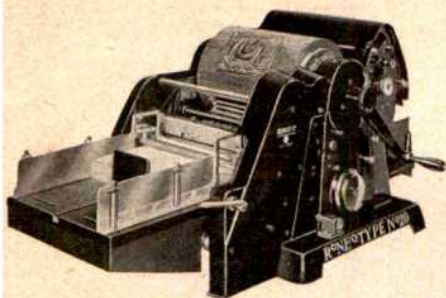
SAVING OF 25 PER CENT ON RIBBON COSTS: an exclusive scheme under which an allowance is made for returned used typewriter ribbon spools enables users to make this economy.

CABINETS: designed for typewriter supplies, partitioned to take 36 typewriter ribbons, 26 boxes of carbons, cleaning equipment, etc., is offered free to users.

RONEO, LTD., 17, Southampton Row, London, W.C.1.

RONEOTYPES: for facsimile letter work are too well known to need enlargement here, but their—

NO. 20 RONEOTYPE is a comparative newcomer; it fulfils the need of those



Popular model Roneotype 20

operators who, while wanting something more than a hand-machine, do not require a big-capacity all-electric model.

The No. 20 is an economically priced machine with a high performance for facsimile letters and all kinds of office printing and publicity matter.

RONEO-NEOPOST, LTD., Victoria House, Southampton Row, London, W.C.1.

NEOPOST "INSURANCE" FRANKING MACHINE: does a special job by eliminating the need for handling cash or negotiable stamps for employees' National Health and Unemployment cards. This is a complete safeguard against losses, and is a great time-saver.

For instance, there was the recent alteration of the Ministry of Labour's rules, under which an employer may now hand to an employee leaving his service the latter's franked unemployment book, instead of, as heretofore, having first to send it to a Labour Exchange and obtain a new book to hand to the departing employee. This simplification of procedure is a real advance, and should increase the use of these franking machines by employers.

The machine is simple. Separate units are provided for each value required, but these units are instantly interchangeable.

This machine, and other new Neopost developments, will be at the Exhibition.

RUBERY, OWEN & CO., LTD., Darlaston, South Staffs.

FILING-CABINETS: standard type, four drawers fitted with oxidized card holders and handles; roller suspension arms. Quarto and foolscap models. Automatic locking device extra. Plan filing-cabinets: for engineers, architects, etc.; protect drawings, etc., from dust, vermin, damp. Standard units—six or eight drawers, each with hood at back, double hinged compressor-flap at front to prevent drawings curling. Chromium-plated card-holders and handles.

LOCKERS: steel clothes lockers; hygienic, fire-resisting, vermin- and pilfer-proof. Built on nest principle; rigid construction; doors hung on butt hinges, concealed; six-lever lock; duplicate keys; doors louvred for ventilation, contain recessed card-holder.

STEEL SHELVING: adjustable and interchangeable; backs, partitions, bin fronts and dividers easily added. Erected to meet all usual shelving requirements.

OFFICE TABLES AND DESKS: types for directors, secretaries, managers, typists, etc. Standard model (Typists') 60 by 27 by 30 in. high. Ledge at back to prevent papers slipping to floor. One drawer left, three right side for materials, personal goods, etc. Office Desk: welded steel; right-hand pedestal type with linoleum top; two box-drawers, rigid con-

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struction, mounted on steel slides; brass-pull to each drawer. Various models available.

GAS-MASK STORAGE: steel shelving specially designed. Shelving is 7 ft. 2 in. high with 4 shelves, 21-in. centres. Each bay is approximately 3 ft. 9½ in. wide. Each shelf takes 4 cartons and 4 cans = 200 gas-masks unassembled. Therefore 5 bays would accommodate 1,000 respirators.

Special steel benches for gas-mask assembly work.

STEEL AND GLAZED PARTITIONS: quickly erected, easily rearranged; rigid; provide for service wires, sound-insulation panels, etc.; fire-resisting. Built on unit principle. Various styles, sizes, etc., for office or factory available.

See announcement on page 63.

RUTHURSTAT, LTD., 12/13, Astor House, Aldwych, London, W.C.2.

FACSIMILE REPRODUCING APPARATUS copies plans, documents, correspondence, printed matter, etc., by photographic process, but without need for dark-room or skilled operators.

MAMMOTH MODEL takes originals up to 42 by 32 in. Has vacuum-pressure frame, automatic timing, retractable filter, etc.

INTERMEDIATE MODEL, copying capacity 20 by 26 in., which is as big as anything required in the ordinary office.

OFFICE MODEL, double foolscap.

MIDGET MODEL, foolscap.

None of these models require skilled workers for their successful operation.

See announcement on page 64.

THE SHANNON LTD., Shannon Corner, New Malden, Surrey.

THE SHANNOGRAPH: A new filing system for letters and documents which makes neatness obligatory and automatically puts a check on misfiling. Every folder is suspended on two rust-proofed steel hangers so fixed that when the folder is in the drawer a narrow strip is exposed and kept perfectly flat.

This strip takes a label the width of the folder. The label takes the typed name and address of the correspondent or the name of the subject; thus exceptionally good visibility is provided.

Permanent signals in colour can be made on the label to denote department or subject, territory, credit, etc. A chart-



ing code provides a series of colour marks which move progressively to the right in accordance with correct filing order of the folders. If a folder is out of place the graph is out of step. No insert folders are required, thereby saving expense and increasing filing space of the drawer. The drawer compressor may be removed, and guides, too, are dispensed with, saving more filing space.

A special frame on which folders are suspended is all that is required to convert any ordinary filing drawer to Shannograph.

Provision has been made for much or little correspondence by a range of folders of different capacity, from ½ in. to 1½ in. or even more. Each folder is punched at the base to enable a bull-dog clip to be affixed when it is taken out of the files; thus loss or misplacement of papers is prevented.

Shannograph can be used as something more than a filing system. It possesses features which make it a live, profit-earning part of a business. It can be adapted to combining filing with credit sanction, works progress record, delivery follow up, contract progress, and many other uses.

There are an infinite variety of ways in which the combination of visible edge and folder can be utilized, and those familiar with visible card systems can realize that the new system will have great possibilities, combining as it does a filing system with a visible record.

Economical in cost and space, it seems well worth consideration by those who have never yet had the efficiency they have a right to expect from their files.

Shannograph can be arranged alphabetically, numerically and geographically, while for subject filing it offers advantages of arrangement never possible before.

THE SHANNOBLOC: An alternative method of applying the suspended filing principle cuts out waste of time filing and ensures rapid identification even in the largest systems.

Special index tabs, which do not soil and are always easy to read, are set at

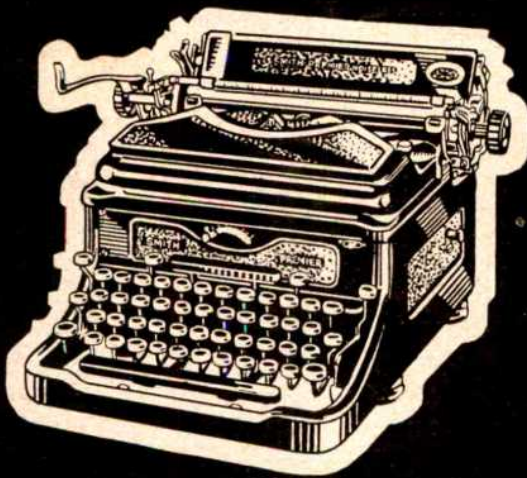
22

TIMES QUIETER THAN AN ORDINARY TYPEWRITER

THE SMITH PREMIER

New Model NOISELESS

A BRITISH
EMPIRE
PRODUCT
MADE IN
CANADA



FOR FULL DETAILS WRITE TO SMITH PREMIER TYPEWRITER CO. LTD., 4, ST. PAUL'S CHURCHYARD LONDON, E.C.4. ('PHONE: CITY 5361)

an angle to catch the eye and can be positioned for easy location. Folders never become out of date, for labels are instantly removable for re-indexing, and special folders are "spot-lighted" by additional colour signals.

Metal bars run through the double tops of the folders, to suspend the folder from a frame. Thus, Shannoblic Folders remain at a uniform height regardless of how heavily they are loaded.

The Shannoblic is also adapted to desk use. Folders are suspended from a frame in the double drawer and can be indexed for individual needs. This arrangement makes for easy organization of desk work and saves executives' time in keeping papers on work in hand accessible and in order.

OFFICE FURNITURE: Increasing demand for office furniture at economical prices led Shannon to introduce a new range of desks and tables. The "Contract" Suite offers quality furniture at new low prices. A 4 ft. 6 in. double pedestal desk can be obtained for as little as £5 17s. 6d.

The Shannon Limited has a complete range of office equipment and filing supplies and offers an advisory office planning and equipment service. The Company has showrooms and representatives in each of the larger provincial cities.

See announcement on page 29.

SMITH'S ENGLISH CLOCKS LTD.
Cricklewood Works, London, N.W.2.

"SECTRIC" SYNCHRONOUS ELECTRIC CLOCKS: harness the entire organization of a firm to the accuracy of A.C. mains-controlled time. Master clocks and individual clocks of a wide range of styles for executive and general offices and factory.

"SECTRIC" TIME RECORDERS: mains-controlled time adapted to employee and other time recording.

See announcement on page 53.

SMITH PREMIER TYPEWRITER CO. LTD., 4 St. Paul's Churchyard, London, E.C.4.

NEW MODEL NOISELESS: 23 mechanical improvements including: pressure-printing device on all type keys to eliminate noise; only one-third effort needed to operate compared with standard machines. 88-character keyboard; special pressure control for varying position of carriage to suit thicknesses of work; interchangeable card platen; four-way type guide maintains alignment; variable line-spacing, etc. Carriages to take paper from 11¼ to 27 in.; type and signs to customers requirements. Attachments supplied to handle continuous stationery, record cards, carbon ribbons for hectograph work, etc.

STANDARD NOS. 50 AND 60: "Segment shift" typewriters; clear visibility; light, quick basket-shift for capitals. Carriages for paper from 10½ to 42½ in.; rubber feed-rolls, keep paper rigid when typing. Model 50 has 84 characters; Model 60 and 92; all modern type styles and languages. Both models fitted single-bar tabulator; also supplied with 10-key, inbuilt decimal tabulator.

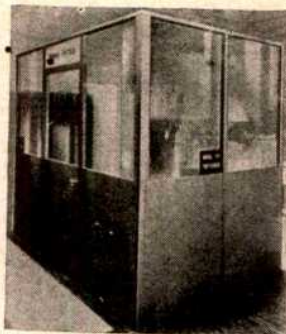
NOISELESS (PORTABLE) 51: same noiseless type-bar action as Standard Noiseless. 88-character keyboard; all operating features of Standard machine (except tabulator); one carriage width, taking paper 9½ in. wide; various style types and keyboards for most modern languages. Travelling-case; weight, with cover, 16 lb. 6 oz.

When planning Additions
to or re-arrangement of
your Administrative
equipment you should
investigate

**RUBERY OWEN
STEEL EQUIPMENT**



STEEL & GLAZED SCREENING (Office Type). Strong, rigid, hygienic, and provides elasticity for additions and alterations. Easily built from unit panels. Approx. 8 ft. high x 3 ft. wide.



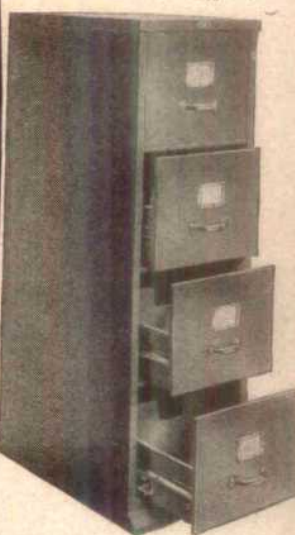
WORKS TYPE SCREENING. An inexpensive form of partitioning for factories, warehouses, institutions, etc. Minimises dust, germs, and fire risks.



STEEL PLAN-FILING CABINETS. Specially designed for Engineers, Architects, etc., for protecting large numbers of drawings from dust, vermin, etc. Supplied in Standard units of 6 or 8 drawers. Each drawer fitted with hood at back and compressor flap at front to prevent curling of drawings. Prices from £21.

We are ready to co-operate in any scheme. Let us send you our illustrated booklet describing installations of this nature in use to-day by many leading industrial and commercial concerns, public utility undertakings, Corporations, etc. You will be under no obligation.

STEEL FILING CABINETS. Four drawers, fitted Oxidized Card Holders and handles, runs smoothly and easily on Roller Suspension Arms. Price £4 8s. 6d. Plus 10%.



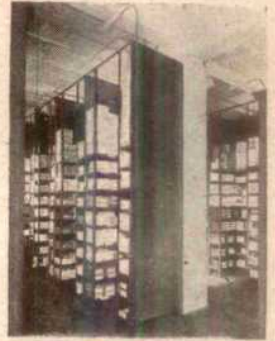
STEEL CUPBOARD. Solidly built for hard wear and long service. Three fixed shelves, size 72" x 24" x 18". OFFERED AT THE VERY LOW CHARGE OF £3 net. Plus 10%.



STEEL OFFICE DESKS. Highest grade welded steel construction ensures strength and long hard wear as well as neat and attractive appearance. Drawers mounted on steel slides to ensure easy running. 45" x 30" x 30", finished stove enamel olive green.

STEEL CLOTHES LOCKERS. Roomy, hygienic, fire-resisting and vermin and pilfer-proof. Fitted with shelf and hat and coat hook. Supplied singly or in nests to suit requirements.

STEEL ADJUSTABLE SHELVING. A structure of Rubery Owen Shelving of the special "Recess" type, ensuring greater storage capacity, supplied to W. H. Smith & Son, Ltd., Lambeth, S.E.1. Steel Storage Equipment can be erected to any individual requirements.



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Sole Manufacturers:

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The Ruthurstat Electro-Copyst
 Full range of sizes from Office Models
 to 42 in. x 32 in. Engineering Models
 10 hours typing reduced to 30 minutes
 6 months tracing reduced to 2 weeks

SMITH PREMIER (PORTABLE) NO. 11: has every operating feature of standard typewriter, including 5-stop tabulator. 88 characters; weight 17 lb. 1 oz.

PORTABLE 5 T. and 5 Par: similar to Victor T and S, but designed to fit in smaller case and fixed to baseboard. Difference between T and Par models, former has 5-stop adjustable tabulator for statistical work, latter an automatic 5-stop paragraph key (operates without setting of stops); weight 5 Par, 13 lb.; 5 T., 13 lb. 2 oz.

CHUM PORTABLE: standard keyboard; key which automatically spaces paragraphs of 5 spaces without stops being set; weight with travelling-case 12 lb. 8 oz.

HOME PORTABLE: full standard keyboard; English only; weight 11 lb. 7 oz.

RIBBONS AND CARBONS: complete range of typewriter supplies and accessories for every office machine.

SERVICE: branches in British Isles, agents and branches throughout world where full mechanical service is available. Contracts arranged for monthly calls of mechanic to clean, oil and maintain typewriters.

LINE-A-TIME COPYHOLDER: stands behind typewriter in direct line of sight. Notes move upwards always at correct reading point. Line indicator; adjustable spacing; models for shorthand note-books and paper up to 36 in. wide.

See announcement on page 62.

W. H. SMITH & SON LTD., Business Forms Dept., Bridge House, London, S.E.1.

"ALACRA" CONTINUOUS STATIONERY: forms for use on all makes of typewriters, accounting, tabulating and other machines; carbon interleaved; up to 15 copies from one typing (electric machine); exact registration always. Holes punched in the stationery are aligned to one-thousandth of an inch; as forms pass under platen they are held in dead accurate registration by pins which pass through the holes. As platen comes on upward turn, pins recede automatically; they never catch in forms, but prevent creeping and slipping at vital point of turn. Machines are fitted with special platens equipped with aligning pin-wheels; no charge made for change-over or platens; platens renewed free of charge whenever necessary. System operates on power- or hand-operated machines; eliminates stoppage to adjust carbons and check alignment; some users report 15 to 30 per cent increased work from machines.

See this firm's announcement on page 43.

STEEL EQUIPMENT

Steel cupboards, storage bins, lockers all in several types and sizes, for both office and works use. Adjustable steel shelving as seen in the small illustration below.



SCIENTIFIC STEEL SEATING

County Class chairs as illustrated for all office workers and the most extensive range of fatigue eliminating Works Seating with steel frame, on the market.



EVERTAUT LIMITED
 Proprietors: J. B. BROOKS & Co. Ltd.
 Walsall Road, Perry Barr,
 BIRMINGHAM, 22

EVERTAUT LIMITED
STAND NUMBERS 5 AND 7
 BUSINESS EFFICIENCY
 EXHIBITION OLYMPIA

Send for our new 32-page
 Catalogue giving our full
 range of products.

VENUS PENCILS

VENUS PENCILS are incomparably smooth and long lasting, their standard of quality never varies.

MADE IN ENGLAND
 KNOWN THROUGHOUT THE WORLD
 If you will state the nature of your work and choose two different grades which you think most likely to suit, we shall be very glad to send you samples to try.

VENUS PENCIL Co. Ltd., LONDON, E.5

From 6b
 softest to
 9b, hardest

STANDARD OFFICE SUPPLIES
CO., 9, Lovell's Court, London, E.C.4.

THE ACE HEAVY DUTY LEVER-
TYPE STAPLER: lever allows the HC



The Ace heavy duty stapler

$\frac{3}{4}$ in. staple to penetrate the hardest materials with the greatest ease.

ACE FOOT-POWER TREADLE MACHINE: very large numbers of these have been installed in factories, in dry-cleaning establishments, etc., and can be fitted for use with either $\frac{1}{4}$ -in. or $\frac{3}{8}$ -in. staple. Strongly built, weighing 50 lb., they withstand the hardest usage.

ACE CLIPPER STAPLING PLIERS NO. 702: much attention has been paid to developing a satisfactory stapling pliers.



Ace Stapling Pliers

These are so constructed as to be jam-proof, and are extremely light to handle, loading 210 staples in one strip.

ACE 102 STAPLER: almost a universal office accessory. Notably trouble-free. Loads 210 $\frac{1}{4}$ in. Ace staples.

A TEST: copy of Report from an A.R.P. Warden on experiment with stapling light-obscuring material to window frames:

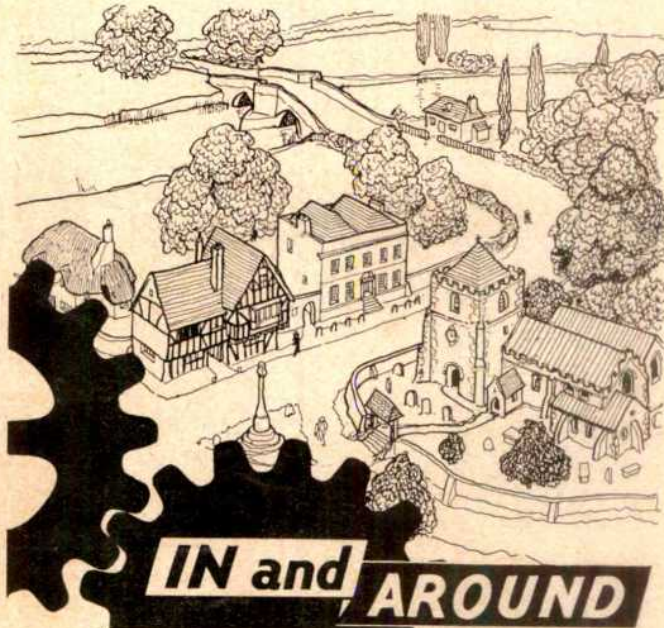
"Test carried out at Control Post A1/5 with a tacking machine used for tacking labels to packing-cases. Tacker used was "ACE" Tacker Model 145, using $\frac{3}{8}$ -in. staples. Test consisted of covering a window 5 ft. by 4 ft. with blanket material, and afterwards with opaque paper.

"The window was covered in less than two minutes, 30 staples being used.

"Further test with ordinary tacks and hammer was less successful; in the case of the paper this tore in several places. Speed of operation was also far less."

THE TAN-SAD CHAIR CO. (1931)
LTD., Avery House, Clerkenwell Green,
London, E.C.1.

TAN-SAD SCIENTIFIC SEATING:
science of comfortable seating has been



BIRMINGHAM

For the industrialist Birmingham offers the most economic facilities for every type of industry. Nearly 500,000 skilled and adaptable workpeople in 1,500 widely differing trades. Abundant raw materials. Railways, airports, roads and canals link home and export markets. For the tourist, also, Birmingham is ideally situated. In the heart of the Midlands, surrounded by old world villages, historical castles, cathedrals, woods and rivers; villages and fortresses—all that is characteristic of England's beauty. Make Birmingham your centre for commerce or country.

The City of Birmingham Information Bureau will be glad to supply full information regarding its industries or information concerning Birmingham's facilities for the tourist. Write to the:

CITY of BIRMINGHAM INFORMATION BUREAU Council House, Birmingham

When in London call at the Information Bureau, 29 Cockspur St., London, S.W.1

studied by makers of Tan-Sad Seating. Wide range of chairs and stools, each designed to suit the work of the user, to enable him to work with the highest degree of comfort and a minimum of fatigue. All models incorporate the Tan-Sad system, in that being anatomically correct in design and construction, they enable perfect posture to be maintained.

TELEPHONE RENTALS, LTD.,
Horseferry House, Westminster, London, S.W.1.

"TELEMATIC" AND "CHRONO-

MATIC" SERVICES. "Telematic" is a complete inter-departmental telephone service providing from 2 up to 800 lines of communication, installed on a rental or sale basis, inclusive of regular inspection and mechanical upkeep. The main types of apparatus are referred to by code numbers.

TELEMATIC 50/500 consists of instruments with dial switches operating through a Private Automatic Exchange serving any number of points from 16 to 800 with absolute secrecy.

Selected instruments may be equipped with a "Priority" feature enabling Execu-

WELWYN

is Planned
FOR INDUSTRY

These Firms Mean Business!

...I.C.I. (Plastics) Ltd.
Lincoln Electric Co. Ltd.
Murphy Radio Ltd.
Norton Grinding Wheel Co. Ltd.
Roche Products Ltd.
Shredded Wheat Co. Ltd.

May we send you a copy of "Industry at Welwyn", a new and attractively produced book which will tell you why these firms established works at Welwyn? It may solve your problem too.

Industrial Dept.: WELWYN GARDEN CITY, Ltd., Herts. Telephone: Welwyn Gdn. 3456

COLOUR ATTRACTS

It is a generally accepted fact that colour attracts three to four times more business than monochrome.

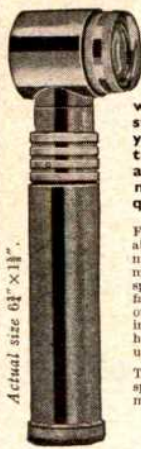
The colour-gravure process is ideal for the faithful reproduction of coloured subjects and is exceptionally economical, especially for long runs.

We would welcome the opportunity of sending you specimens.

BEMROSE

AND SONS LIMITED
AFRICA HOUSE, KINGSWAY, W.C.2
MIDLAND PLACE, DERBY
DAIMLER HOUSE, 33 PARADISE ST.
BIRMINGHAM, 1

NO MAN CAN KNOW TOO MUCH OF HIS PRODUCT



The Ultra Lens is a revealing eye of six actual diametrical—36 area magnifications, which brings out points of strength or weakness. Whether you are engaged in manufacturing, buying or selling, it is an ally of real value. No instrument you can buy, will more quickly justify and pay for itself.

For the close scrutiny of every conceivable object, metals, tools, fabrics, fibres, minerals, precious stones, paint, print, manuscripts, biological and botanical specimens, cutting edges, fractured surfaces, raw materials, and innumerable other purposes, the ULTRA LENS is invaluable, and presents in many instances hitherto unsuspected data, which can be used to advantage.

The price is £2-5-0 complete in case with spare bulb, battery, and transparent measuring scale. Postage abroad, 2/6.

The Ultra Lens Company

ROCHARD BOCK

BRITISH MADE
Fully descriptive leaflet on request
37 Finsbury Court, Finsbury Pavement, London, E.C.2. Phone: Nat. 384

A FREE SERVICE

Subscribers are entitled to free advice on any problem arising in their own businesses under the following heads:

Management (budgeting, costing, statistics, stocks, personnel control, etc.).	Transport (internal and external, costing, maintenance, etc.).
Office equipment (the use of every kind of appliance, system and method).	Lighting (to reduce costs and increase efficiency).
Machine Acctg. (any special problems).	Insurance (business and personal cover, Factory Act., etc.).

Service Department
BUSINESS

Whitefriars House, Tallis Street, E.C.4

tives to interrupt conversations of subordinates instead of waiting for them to become disengaged. Private secretaries can weed out unimportant calls to their chiefs. Conferences can be held between executives.

Loud-speakers, staff-locators, and fire-alarms can also be incorporated.

Press buttons may be associated with a telephone to obviate using the dial when calling certain points most frequently spoken to. By "Tie Lines" between switchboards, widely separated premises may be included in a single automatic system.

TELEMATIC 15: suggested for businesses with from 3 to 17 departments. An attractive feature is that Master Station fitted with sensitive transmitter and loud-speaker which leaves both hands free during a conversation.

TELEMATIC 15 MASTER: loud-speaking instrument notable for clear reproduction of the voice. Priority, Conference, and Staff Location features can be fitted.

TELEMATIC 5: suitable for installations where communication is required between a smaller number of points, say 3 to 10.

STAFF LOCATION ROUND CALL: this service can be installed separately or incorporated with Telematic or Chronomatic equipment. Executives temporarily absent from their desks can be located in a few seconds.

For QUICK REFERENCE under 'Products'

Use the Classified Index on Page 22

MUSIC IN FACTORIES: that the tonic effect of broadcast music on factory workers produces increased output is proved by a recent Government investigation. Installation of equipment for this purpose, its maintenance, and the supply of records to suit the rhythm of various kinds of work is part of "Telematic" service.

FIRE-ALARM AND A.R.P. SERVICE provides an effective, simply operated system for factories and business houses complying with the new Factory Act.

"CHRONOMATIC" TIME CONTROL SERVICE is given by that section of the Company which specializes in co-ordination of the three classifications of "Time" important to factory organizations—"Visible," "Audible" and "Recorded." The Service maintains "Time Discipline." It ensures uniform time throughout the premises by synchronizing every clock, shift-signal and time-recorder with a Master Control unit.

MASTER TIME CONTROL UNIT: controls and operates every unit in a Time Control System. Although electric, it is not directly dependent on mains supply; it will continue to operate the whole system even if mains fail.

SLAVE DIALS: are the "wall" clocks, and are synchronized by the Master Unit.

TIME RECORDER: automatic all-steel unit with two-colour printing, synchronized with Master Unit. Can be used for both attendance and cost recording.

JOB COSTING: although quite practical to use standard "Chronomatic" Time

Recorder for attendance and cost recording, it is sometimes more convenient to use a special Job Coster. This machine is also suitable for dating and timing incoming mail.

TIME-CARD LAYOUT SERVICE: available to subscribers, without charge, the services of a Cost and Production Control Department for preparation of job cards, cost analysis sheets, progress plans and apportionment of overheads in conjunction with any existing system.

CHRONOGRAM: an automatic unit, controlled by Master Unit, that sounds any type of audible time-signal at any desired times.

J. W. TIMMS, Guardian Safe Works, Wombourne, nr. Wolverhampton.

SAFE CABINETS, "Guardian" model, tested in 1,310°F. furnace for over one hour, resulted in the temperature inside the cabinet rising only to 218°F.—that is 82° below the point at which paper begins to char. A feature of these cabinets for safe storage of ledgers and other records is their unusually low price.

See announcement on page 53.

UNEX, LTD., 15, Holborn Viaduct, London, E.C.1.

CONTINENTAL Adding and Accounting Machines; there are three new models:

MODEL 9S: a low-priced Listing machine for general utility work, with direct subtraction and hand-operation, easy to carry about the office but robust in construction.

CONTINENTAL RECEIPTING MACHINE receipts original documents by means of a small front-feed carriage. Upon the document is printed the following information:

- (a) Amount received with cyphers to the left to prevent alteration.
- (b) Automatic consecutive number.
- (c) The date of receipt.
- (d) Code word of up to 12 letters to ensure genuineness of receipt.

This is also recorded on a tally roll by double ribbon, together with account number. This tally roll can be used as a posting media.

The printing mechanism, tally roll and date are locked against alteration, whilst another key will disable the date. Automatic numbering and code-printing devices enable machine to be used as an Adding-Subtracting machine.

The third new machine is the Gas and Electricity Biller, developed from Model 700 Statistical Analysis machine. It provides up to 29 separate totals, and is believed the first machine of its type capable of using continuous stationery, spacing from one bill to the next being entirely automatic. The bills can be posted in duplicate, and after posting are re-folded, the original in one magazine and the duplicate in another. The time-saving by avoiding manual insertion, alignment and removal of bills is considerable.

UNIVERSAL POSTAL FRANKERS, LTD., 1-7, Canonbury Street, Essex Road, London, N.1.

POSTAL FRANKING MACHINES: in various size models from an inexpensive hand-operated machine to the high-speed machines with semi-automatic feeding, sealing and stacking devices.

Even the cheapest hand-operated franker is, of course, about five times as fast as any manual method of attaching stamps. But whatever capacity machine is used,



AN ASSET in your CAPITAL ACCOUNT

In these days of fierce competition no business or industrial undertaking can afford to neglect any factor which might contribute towards its ultimate success.

Every available asset *must* be capitalized—and an advantageous factory location is of such importance that it must rank high in any list of assets.

An unbiased examination of Lancashire's industrial record cannot fail to convince you of the area's inherent ability to cater successfully for the ever changing needs of modern industry.

Since 1931 more than 600 new industrial establishments and 200 factory extensions have been started in Lancashire. There are now

2,500 more non-textile factories, while over 200 redundant textile mills have been converted into factories for an amazing range of products. Employment for more than 32,000 work-people is being provided by enterprises introduced by the Lancashire Industrial Development Council. These facts indicate that Lancashire is as much a vital force in the country's economic life now as it ever was in the days of the industrial revolution. It is a force which must strengthen the hands of all those associated with it.



Inquiries for information and expert advice on available factory locations are welcomed and treated in strict confidence.

J. BENNETT STOREY, General Manager,

LANCASHIRE INDUSTRIAL DEVELOPMENT COUNCIL

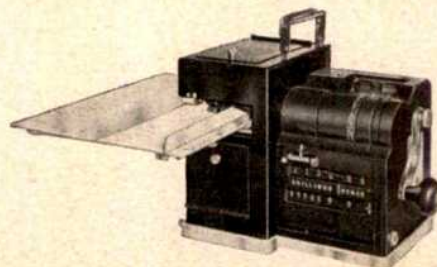
SHIP CANAL HOUSE, KING STREET, MANCHESTER, 2

Preliminary information obtainable through:—

THE TRAVEL AND INDUSTRIAL DEVELOPMENT ASSOCIATION OF GREAT BRITAIN AND IRELAND, 29 Cockspur Street, London, S.W.1. British Empire Building, Rockefeller Center, New York, 28 Avenue des Champs Elysées, Paris, and 78 Leidschestraat, Amsterdam.

the principle of franking has advantages in saving supervision, checking and the otherwise inevitable petty losses.

"MIDGET" MODEL: provides limited



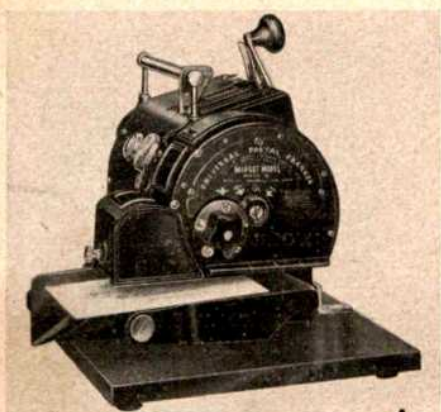
The Junior Multi-Value Franker

number of postal values, generally between ½d. and 1/-, at user's option. Speed of operation is up to 2,500 frankings per hour. Midget is available in two models: (a) a two-value and (b) improved model with 3 or 5 denominations, front dial selector, and can be electrically operated.

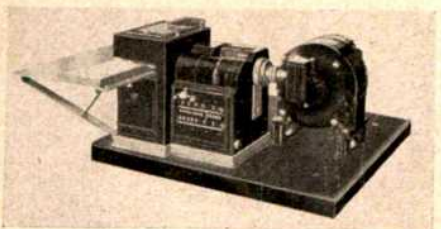
THE "JUNIOR MULTI-VALUE": prints any of 23 denominations up to 11½d. at one impression. It handles all sizes of envelopes, and thicknesses up to ½ in. Labels can be franked for parcels. Speed, up to 2,300 an hour. Is available as hand or electric desk model. Latest feature is a trip mechanism preventing the recording or printing of postage until the letter is fed into the rollers. With Electric Model speed is 5/6,000 per hour.

THE "MULTI-VALUE": prints all

IF your outgoing mail averages as many as 50 letters a day . . .
IT WILL PAY YOU to investigate THIS MACHINE . . .



Universal "Midget" Postal Franker. (Hand operated). Franks any three or five values with facilities for repetition. Meter records total expenditure, and balance on hand.



Universal Junior Multi-Valve Electric Model. All values between $\frac{1}{2}$ d. and 1/-.

UNIVERSAL

Postal Frankers Ltd

1-7 CANONBURY ST • LONDON • N-1 Phone: Clissold 3613-5

Showrooms: 99-101 Regent Street, W.1

It must not be supposed that the benefits and economies effected by the introduction of the postage-meter are available only to the large type of concern whose correspondence runs into thousands daily.

To-day, Universal Postal Frankers Ltd. can cut down your postal expenditure even if your mail does not exceed, say, 50 letters a day average.

For a small initial outlay you can

- 1** Eliminate all the small losses connected with your postage account (due to pilferage, wastage, etc.) which at the end of a year run into surprisingly large amounts.
- 2** Keep an infallible check on your postage-accounts records.
- 3** Eliminate the waste of time and effort on the part of your mail-clerks in balancing and counting stocks of stamps as well as in the tedious task of hand-stamping.
- 4** Build up increasing prestige by letting your entire connection know that you are using the same progressive methods in conducting your business that are associated with the management of high-ranking concerns.

You should investigate this method. We will gladly show you how it can be introduced to aid your mailing-department—no obligation, of course.

denominations of postage up to 29s. 11 $\frac{1}{2}$ d. in one impression. It is similar to "Junior," but both hand and electric models have automatic trip. Speed of hand machine 2/3,000 per hour; electric, 5/6,000.

THE "FS" PITNEY-BOWES MODEL: is electrically operated medium-speed machine for franking and sealing simultaneously or separately. It automatically feeds, separates, franks, seals and stacks at 125 per minute and deals with all dimensions up to 12 in. by 8 in. and thicknesses of $\frac{3}{8}$ in. It operates six denominations of postage, and attachment can be fitted for franking gummed labels for parcels.

Latest development is the introduction of the label attachment for dealing with

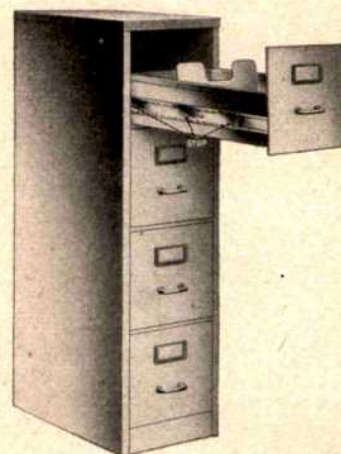
bulky packets or parcels. This is available with Midget, Junior, Multi-Valve and "FS" Models. The attachment automatically feeds from a roll of paper and delivers a franked slip cut off to required size ready for affixing.

UNIVERSAL ENVELOPE SEALING MACHINE: is electrically operated and has output of 125 per minute for all lengths of envelope up to 12 in., and will automatically feed, separate, close and seal in one operation. It can take envelopes up to 12 in. by 9 in. and to a thickness of $\frac{3}{8}$ in., and handles both fully-paid mail and printed matter in the special "penny-saver" envelopes.

Special attachment can be fitted for counting the envelopes handled or printing return address or advertising slogan.

VALOR CO., LTD., Bromford, Erdington, Birmingham 24.

STEEL EQUIPMENT: files and cabinets for every office need; Waste-paper bins, clothes lockers.



A particularly strong and easy running file: One of Valor's most popular

UNDERWOOD ELLIOTT FISHER, LTD., 120, Queen Victoria St., London, E.C.4.

NEW CLASS "D" AUTOMATIC ACCOUNTING MACHINE: this is an outstanding addition to the wide range of Underwood Sundstrand machines.

This new Class "D" range, if equipped with two separate and distinct Cross-footers which may be controlled automatically or manually. All amounts are written on one keyboard regardless of which Crossfooter and/or Register is being affected. No time is lost in selecting the keyboard, no error can occur through writing the amount of the wrong keyboard. Touch operation on a single keyboard results in greater speed and accuracy.

The fact that this simplified keyboard provides automatic column selection obviates the necessity on the part of the operator to select the rows in which the keys are to be depressed and eliminates the possibility of depressing a key in the wrong row.

Each Crossfooter is equipped with direct subtraction of subtracted items, being automatically printed in red. In addition, each Crossfooter is equipped with Automatic Credit Balance feature, there being no locked keys or release keys. Thus, in addition to ordinary debit balances, the machine prints true credit balances automatically, without operator having to "touch" a single key of any kind.

The machines are equipped with eight registers for the automatic accumulation of column totals, and these registers may be used either independently or jointly with the Crossfooters. All registers are automatically controlled and any register may be engaged in any column.

On completion of a run of work, the machine will print all register totals automatically in their correct positions, thus eliminating all possibility of error in clearing the machine.

UNDERWOOD "MASTER" TYPE-WRITER: with Automatic Right-Hand Margin Justifying Device. Enables ordinary typed matter to have the perfect, symmetrical appearance of a printer's type-set job. Irregular right-hand margin is banished; the benefit of this is not only infinitely better looking letters but will be

felt in departments where direct mail, bulletins, advertising copy, etc., is produced.

TYPEMASTER PORTABLES: of three models, two are Noiseless. Noiseless machines of the portable type are rapidly gaining popularity among executives for their own use.

A Complete Air Raid Syren and Factory Broadcasting System

ALMOST every firm will need air raid alarms, and it is important that they should be heard distinctly under the most adverse conditions. This is not so simple as it seems. Even the most powerful syren is generally not heard by those working amongst noisy machinery.

Another factor to be considered is panic. In spite of intensive training, your staff may become panic stricken when they hear the warning that bombs will be dropping a few minutes later. The time factor, too, is important. A.R.P. officials state that ten minutes will be the maximum time in which to take cover. Unless, therefore, the situation is quickly taken in hand by a responsible executive and through a fool-proof system a great deal of trouble is likely to be experienced.

There are several good systems now available. One of them is the warning system perfected by "Ardente." It penetrates the noisiest locations. It is also a loudspeaker installation. Immediately it is switched off the chief warden is able to address every person on the premises, however scattered they may be. After the first shock of alarm an authoritative voice can help maintain orderly evacuation to shelters.

With the system the executive in the control room is able to relay to all shelters a musical programme or a wireless programme giving air raid information. He is also able to exchange information with the warden in charge of each shelter by means of loudspeaking two-way communication. When the raid is over, the control room switches the "all clear" signal to the shelters.

After the excitement some time is taken for staff to settle to work. The process can be speeded up by a reassuring announcement over the factory system by the managing director. This is a big asset in firms where a large number of workers are employed and every minute wasted means loss of profit.

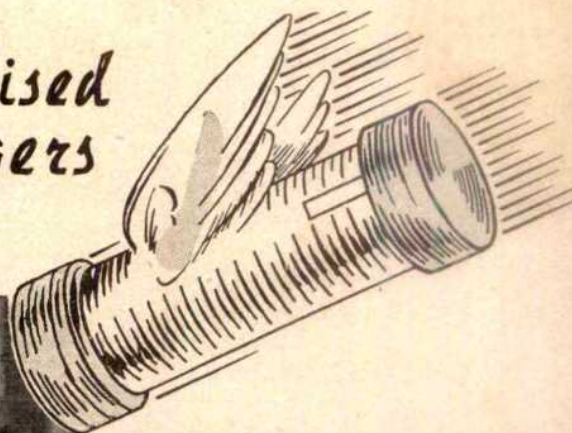
There are a number of auxiliary systems which may also be used. For instance, many large factories are arranging to have one or more observation posts (pillboxes) at certain vantage points. These will be permanently manned in time of war. The "Ardente" two-way communication system links each observation post with the control station. Instructions or information, therefore, can be transmitted

LAMSON

Mechanised Messengers



A Pneumatic Tube Station in Shell-Mex House, London, where an extensive system operates in conjunction with Teleprinter.



A 30 m.p.h. Service to all Departments

The mechanised office is incomplete without

LAMSON PNEUMATIC TUBES

—as necessary to the modern business as internal telephones

Write or phone for Information Sheet No. 201

LAMSON ENGINEERING CO. LTD.

132 CHEAPSIDE - LONDON, E.C.2 - NATIONAL 0202

Pneumatic Tube Systems

Overhead Wire Systems

Ventilating and Heating

Mechanical Handling

between the two immediately. It is unnecessary even so much as to lift a telephone receiver.

Another link can connect the telephone exchange with the control room, so that incoming telephone information is immediately known to the control executive. This information may, of course, be given to the observation posts, the shelters, or throughout the various buildings.

Apart from A.R.P. uses the system is a paying proposition in peace-time. It provides first-class loudspeaking inter-communication and can be used also to broadcast music, messages, appeals, and so on.

TO CHECK DERMATITIS

DERMATITIS is often aggravated after work by sufferers washing with injurious solvents.

A Government-recommended remedy is to apply to the hands a protective coating before work; to wash thoroughly after; and then to apply an ointment.

Following this principle Rozalex, Ltd., have successfully reduced dermatitis in many firms. They supply Rozalex in two grades to apply before work which involves handling (1) oils, tars, and dry irritant materials and (2) solutions of acids, alkalies, etc., and an ointment to apply after washing.



**For all your account work
use the handy, quick
ADDIATOR Machine**

4 models from 21/- to 84/-

Adds and subtracts automatically faster even than you can speak. Manipulation is simplicity itself. Any incorrect operation is automatically checked which means absolute security in action. Numerous testimonials received from all classes of business. Ask for leaflet "B".

K. Bisset & Co. Ltd., Grand Buildings, Trafalgar Square, London, W.C.2. Telephone Whitehall 8275

HOW LONG EACH DAY for RECORD-KEEPING?

Records are kept more easily and quickly with "Robin" looseleaf books. Compact and durable. Inexpensive in first cost and upkeep. Old leaves removed and new ones inserted in a few seconds. "Robin" books are in use where handiness, speed and economy are primary considerations. Prove their usefulness for yourself by taking advantage of this trial offer:

One "Robin" Looseleaf Book, size 5 in. x 8 in., bound full maroon buckram, with A-Z index and 200 leaves, ruled faint, cash or double ledger (please state which required) 9/6
Or bound half maroon pigskin 13/-

J. W. RUDDOCK & SONS
Looseleaf Book Manufacturers
LINCOLN
and at 3 Old Jewry, London, E.C.2

Easy Seeing Steps Up Output in Office and Factory

(Continued from page 12)

equipped. Exhaustive tests clearly demonstrate this.

For the executive who desires to step up production by improving ease-of-seeing in his factory or office this is suggested procedure:

1. First ensure that the sight of each worker is as good as it possibly can be for the range within which each specific job must be done. It is now possible to put people through a simple series of tests which will decide whether or not their sight is "fit" for a particular job. Disclosed sight faults should be properly corrected.

These Are Typical of the Economies Possible

2. Attend to the lighting conditions. Despite the recent intensive drive for better lighting, it is doubtful whether the present average illumination in factories and offices is more than 5 foot candles. It may be conservatively estimated that increasing this to an average of 25 foot candles and cutting out all direct or reflected glare would give a 10 per cent increase in production.

For example, in a job of letter sorting where the lighting was stepped up from 3.6 to 8 foot candles there was a 4.4 per cent increase in production, while the cost of the lighting improvements added 0.6 per cent to the wages bill. In a job of assembling carburettors the lighting was stepped up from 2.1 to 12.3 foot candles. This gave a 12 per cent increase in production and cost 0.9 per cent of the wages bill.

3. Check up on the arrangement of work and the posture in the case of each employee, under the new lighting conditions. Changes should be influenced by two things: (a) improving the ease of seeing; (b) improving the workers' comfort at his job and thereby minimizing fatigue.

There are few factories and offices in which a procedure of this kind would not show results. And these results would not be confined to those measurable in terms of pounds, shillings and pence. One other consequence would be a minimizing of that physical deterioration which, it has been shown, is accentuated by "uneasy-seeing" conditions.

Safety-Zone Retreat Accommodation

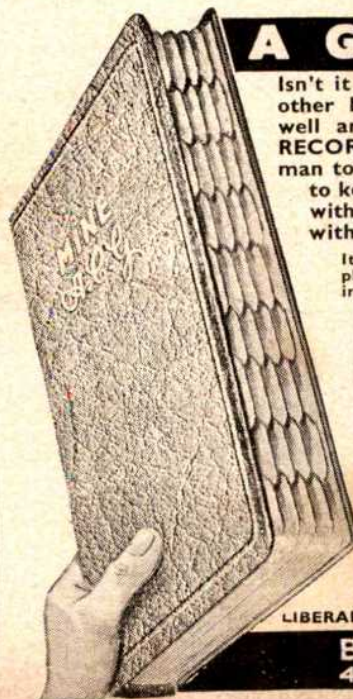
(Continued from page 48)

office equipment you need to install. But over and above that you will have to think about the staff's accommodation.

If the country house is near enough to your staff's homes to allow them to travel to and fro on rail season tickets, all well and good. If not, something might be done in the way of transport

by using your own private car and cars of other members of the staff. Then, of course, there is the question of hiring public transport. All that sort of thing will have to be worked out to suit your own needs.

Alternatively, some of your country house rooms can be fitted up as bedrooms, and perhaps you will have to



A GIFT TO REMEMBER!

Isn't it difficult to decide what to give a client—or any other business man—at Christmas. That problem is well and truly solved if the gift is the **PERSONAL RECORDER**—a gift which is a **COMPLIMENT** to the man to whom you present it. Your client will be glad to keep such a gift as this! Memories fail—sometimes with expensive results—this Book replaces Memory with the infallible Record. It's a Gift to Remember!

It contains 180 super-calendered pages, each a gem of clever planning with a particular place for any and every item of importance in a man's life.

Among the many things provided for are:—

INVESTMENTS	EDUCATION	HOLIDAYS
INSURANCES	EMPLOYMENT	PASSPORTS
PROPERTIES	INCOME TAX	BANK A/C'S
ANNIVERSARIES	MARRIAGES	LOANS
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fix up additional accommodation in the local hotel and nearby houses.

In the case of a country house with big grounds, you might do worse than follow the example of one London firm that has built chalets for its staff's accommodation.

It is the management's idea that some of the expense involved can be recouped by letting these chalets, in peace-time, to approved holiday campers.

In fact, we were told that members of the firm's own staff, and their friends, have already booked the full accommodation for this present summer!

Now, although you may have got your country house in a "safe" area,

it may nevertheless be in a zone in which official A.R.P. precautions for "business buildings" must be carried out, because your country house has now become a "business building" within the meaning of the Civil Defence Act. In this case, any necessary strengthening of the building and/or the provision of adequate shelters must be carried out by you, or by you and the landlord in conjunction, according to whether you are the owner or the lessee of the property.

You may find yourself, too, up against the local town planning authorities. More than one firm that has converted country mansions into business premises has already had the local town planners in high dudgeon.

Somehow the in-coming firms, when making some structural alterations, did not conform exactly to the native ideas of art or symmetry. Result was that certain of the work had to be redone.

But this difficulty is not great. A little common-sense co-operation with the local authorities will avoid any misunderstandings.

In all cases, though, where country property has been bought or leased for business purposes, it is advisable at once to inform the Government (Ministry of Civil Defence) of what is being done. If approval of your A.R.P. plans is secured at the outset, the possibility of a lot of trouble and expense later on can be avoided.

How The Semi-Trailer Vehicle Can Cut Down Your Transport Costs

(Continued from page 40)

actuate the disengaging mechanism. The whole arrangement permits rapid coupling and uncoupling of the semi-trailer unit, even though it is at an acute angle with its tractor chassis, or when both happen to be standing on uneven ground.

Having outlined the main advantages of the Bedford-Scammell, I will now give a brief summary of a full load test. This was conducted with a vehicle placed at my disposal through the courtesy of Keith & Boyle (London), Ltd., Harleyford Road, S.E.11, distributors of Bedford and Bedford-Scammell vehicles.

Carrying weights representing an 8-ton payload, the Bedford-Scammell was driven over a 45 mile course in the North Downs, which demand good all-round performance. In all circumstances, the vehicle travelled "easy" with no suspicion of "snaking" or dragging upon the tractor when rounding road curves. Indeed, the combination created a satisfactory impression from all points of view.

Potential operators will require definite information about the degree of manoeuvrability to be expected when the two units have to be separated during "shuttle" operation. I conducted a special test, therefore, which started with the two units attached. The tractor chassis was then disconnected and driven round in a complete full-lock circle and backed towards the semi-trailer in position for the coupling mechanism to come into action. This convincing manoeuvre occupied only 21 seconds, leaving the combination ready to be driven away under full load.

Further experiments were conducted in a sand-pit at Merstham. This imposed severe demands upon every portion of the vehicle, particularly on the suspension system and steering gear. The tests revealed the sturdy construction of both units and high performance of the Bedford tractor chassis. Several gradients varying between 1 in 15 and 1

in 8 were surmounted without difficulty, although the surface was very loose in many places.

While these tests were in progress I was impressed by the ease with which the vehicle extricated itself from extremely difficult situations. This was due mainly to the powerful torque exerted by the engine at low crankshaft speeds.

Two tests for petrol consumption were made. In the first a distance of 10 miles were covered over a main road on one gallon of petrol. As this appeared to be unexpectedly good a second check was made over the same road in the opposite direction. The distance covered on one gallon of petrol was six miles.

At first thought this suggests an error in one or other of the tests. The explanation, however, is quite simple. With a vehicle of this class any minor variations in road gradient necessitate frequent engagement of the lower gears to the detriment of good fuel consumption. Nevertheless, the average of 8 m.p.g., equivalent to the gross ton

m.p.g. figure of 92.8, is remarkably good for a full-load fuel test. Under actual service conditions where a considerable proportion of the mileage is run light or under partial load, the all-round fuel economy will be appreciably higher.

The usual acceleration tests produced good figures in view of the heavy load. When started from rest from bottom gear, with subsequent engagement of the higher ratios at correct engine and road speeds, the speed of 20 m.p.h. was reached in 16 seconds. The speed on direct drive was increased from 10 to 20 m.p.h. in 32 seconds. It will be seen, therefore, that the combination can put up quite a lively performance. Application of the foot brake at 20 m.p.h. brought the vehicle to rest in a distance of 37.2 feet, a braking efficiency of 35 per cent.

Haulage under full load conditions means, of course, that the Bedford engine has to pull hard most of the time. The tests showed that no matter how hard the work may be there is ample power for the job. In brief, this new Bedford-Scammell offers advantages in performance, convenience and economy that every business executive should investigate.

The Bedford-Scammell is manufactured jointly by Vauxhall Motors, Ltd., and Scammell Lorries, Ltd.

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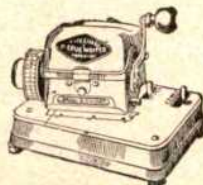


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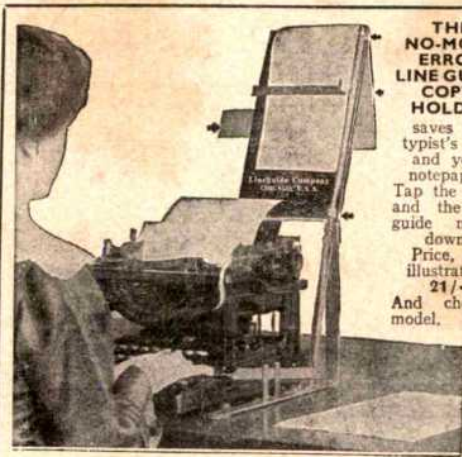
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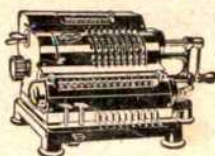
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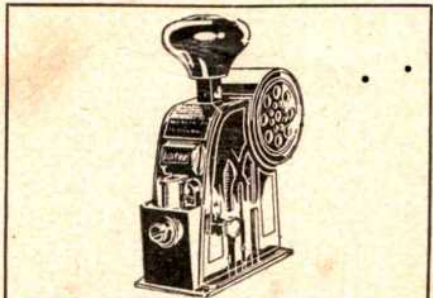
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by
THOMAS DIXON

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This is exactly what happened in 1914. Immediately after war was declared, the rush of volunteers for National Service caused a great shortage of shorthand-typists and clerks, which increased to such an extent that the carrying on of commercial work became a matter of the utmost difficulty.

The Dictaphone came to the rescue in no uncertain way. For many hundreds of firms in all parts of the country found in The Dictaphone a super-efficient substitute for the trained shorthand-writer. With The Dictaphone it was possible to carry on with dictation as usual, the transcription being done by girls who had learned sufficient typewriting for the purpose but were not competent shorthand-writers.

It is certain, should the war, against all our hopes, be prolonged, history will repeat itself in this respect, and firms who are foreseeing enough to anticipate the difficulties that will arise and guard themselves accordingly, will be in a very strong position when the shortage develops.

Even under normal business conditions The Dictaphone offers important advantages in the way of greater convenience, the more rapid and accurate dispatch of business, and a considerable saving in expense. To-day all these claims are powerfully reinforced by the imminent prospect of such a denudation of staffs that clerical labour may be practically unobtainable.

Under these conditions The Dictaphone will be specially helpful because it dispenses entirely with the need for trained shorthand-writers whose services, in any event, will certainly be at

a premium. The Dictaphone user can dictate when and how he pleases, and any girl of reasonable intelligence who has mastered the rudiments of type-writing can do the work of transcribing. And, since she has no shorthand to write, she will gain so much time that her total typing output will at least equal that of the skilled shorthand-typist.

The shortage of office labour during the Great War of 1914-18 did much to establish The Dictaphone in the favour of the business world. Men who by force of circumstances were compelled, almost against their will, to try The Dictaphone speedily found out the advantages of the dictating machine, and many of The Dictaphone Company's largest and most enthusiastic users were brought "into the fold" by the plain fact that they could not carry on their business without The Dictaphone.

These are considerations which are bound to appeal to business men who realize that even in time of war the commerce of the country must be carried on to the very best of our ability. Nothing, of course, can entirely compensate for the loss of loyal and devoted employees. The Dictaphone will, however:

(1) do, better than any human being can, the purely mechanical work of taking down dictation;

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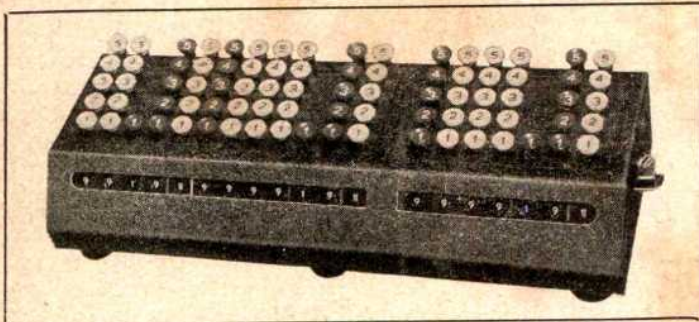
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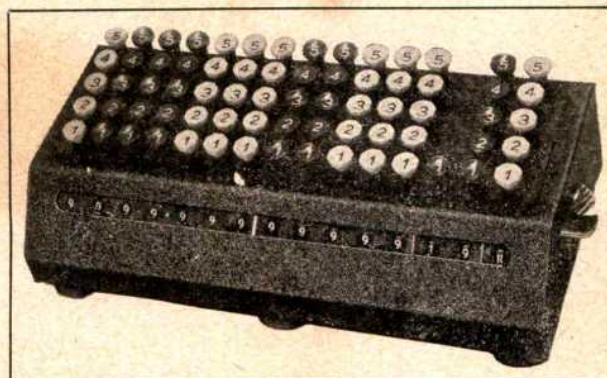
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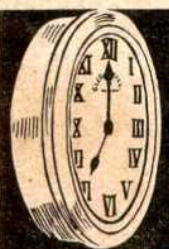


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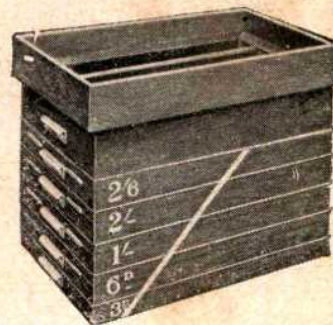
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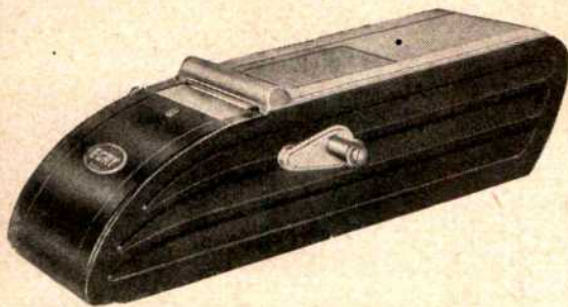
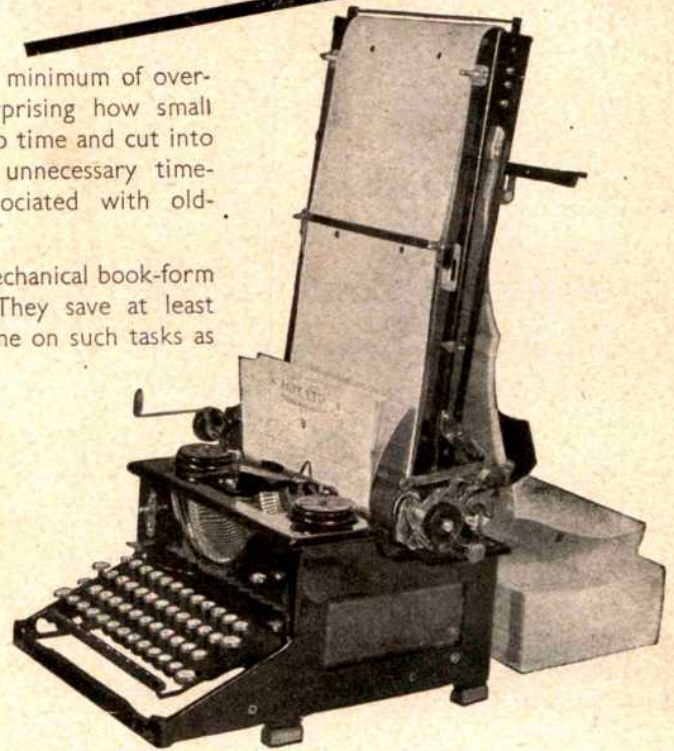
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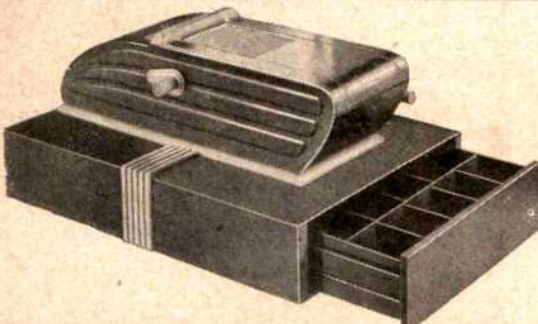
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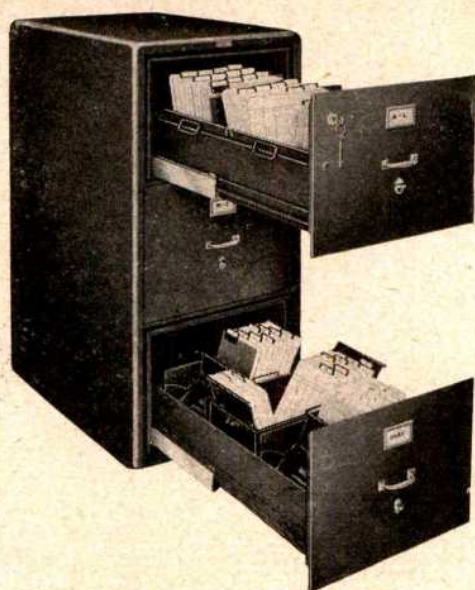
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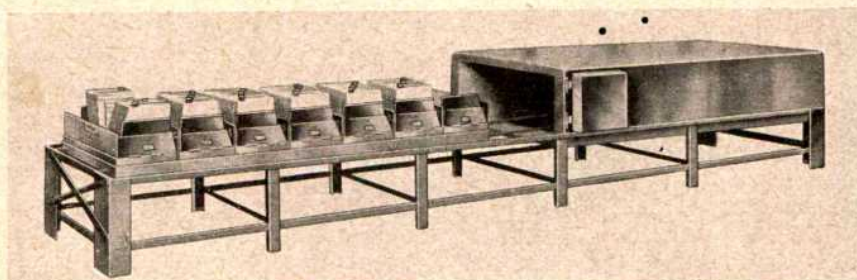


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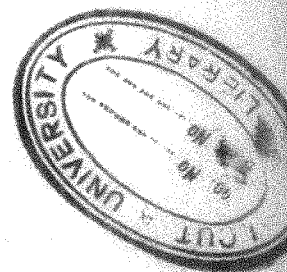
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"Industry must play its part" is a phrase that trips very easily off the tongue: so easily, in fact, that many who utter it do so without any real idea of what the injunction actually involves.

It means, literally, that every individual business in the kingdom, the little businesses as well as the big ones, in fact *especially* the little ones, must do its utmost to keep functioning—profitably if possible of course—but at least to keep functioning. Opportunities are always present for the formation and development of new enterprise.

If businesses do not keep their doors wide open and their hands busy at work, then it is precious little use having the bulwark of a magnificent defence force to keep the pitch clear. Of the two choices: An unscarred terrain and emasculated businesses on the one hand and, on the other, a hundred thousand firms working peak, but with a few cities and factories knocked about a bit, the second, though involving some tragedy, would unquestionably be preferable from a national point of view.

Naturally we do not think of our chances as bound to one or other of these limited conditions. We aim to enjoy the good qualities of each and to guard against the evils of both. But it is up to us. We can create our conditions, by our business thinking and by our subsequent actions.

We have been at war now for about two months. And, looking at the situation as it stands to-day, it does appear that we have not done enough in this direction of keeping up the industrial pressure. We are always excluding the armaments business. Naturally, they

echoes the opinion of thousands of small, medium size and large manufacturing and selling organizations throughout the country. In effect, Ashton says: "Bureaucracy has only one idea, and can articulate only one sound, and that is 'NO'. Business cannot exist, let alone progress, under such an outlook and such restriction. Industry's job then, is to beat the bureaucrat: after that we may get somewhere."

are hitting up records that will probably stand for all time; but the business machine must get a move on too.

Too Much 'Victim of Circumstances' Attitude

From contacts I have had with various businesses in the past few weeks I cannot help feeling that there has been—still is, in fact—too much of the resigned "victim of circumstances" reaction.

Admittedly, the starting processes of this war have been exactly the reverse of those we experienced in 1914. In 1914 the week, the month, even six months, after the declaration saw things at home pretty much the same as before hostilities started. Only gradually, as the war went on, did D.O.R.A. clamp down, slow step by slow step. And as each restriction was imposed business suffered little from it because the country was, step by step, war-tuned to receive it. Furthermore, at the outset there was no air menace of unknown potentialities.

Last September it was different. Defence Regulations slapped down a heavy and all-embracing hand at the moment of the outbreak of war. The air menace, built up by propaganda and our own lively imaginations into

a thing of unpredictable terror, became an immediate possibility. The country almost stood still. At least it stood still so far as everyday business was concerned. Too many people who should have been placing orders, taking orders, thinking of new lines to make and sell, creating business by vigorous advertising and other sound, unjittery methods, or even typing or working telephones, were closing down and overloading the ranks of unemployed.

Such was the effect of an immediate imposition of an entire code of legal control, plus an aerial danger the extent of which no man could gauge.

There is everything in favour of starting a big campaign with the greatest stringency, recognizing the probability of a steady programme of concessions later.

It is a wearying process, no matter how worthy the cause, to feel the progressive imposition of one new restriction after another, whereas it is far easier to accept the whole load while the novelty of emergency colours the picture, and thereafter to enjoy the heartening experiences of official relaxation.

The initial enactment of complete ministerial control suggested a national preparedness for action, with avoidance

of the many mistakes made 25 years ago, that was very cheering to industry as a whole.

Original Optimism Has NOT Been Justified

Two months' experience, however, has not justified that optimism.

Rome, it is said, was defended by citizens who carried a sword in one hand and a trowel in the other. To-day that is still an essential principle.

Bureaucratic control, unfortunately, has made it a very difficult one to apply. The example staged before our eyes by the people who are supposedly running this war is not one of encouragement to business.

On the contrary, it is an example so inimical to industry that executives throughout the country are asserting that business men must first beat officialdom before the other project of winning the war with any promptitude can be really considered: To cite but a few examples of Official "Organization":

Ministry of Information, greatest absurdity since the Tower of Babel, whereas the finest journalistic and advertising brains in the country were ready and "on tap" to help in this vital work. A.R.P. a Local-Authority circus. The Fish Ministry fiasco. The country-wide taking over of profitable hotels in which to install the mammoth growths of Government offices. The appointment as heads of vital Ministries bureaucrats whose own friends, in some cases, refrain from open comment on the selection.

The "Pools," devices that sink the carefully nurtured quality of products, depressing them below the level at which they are acceptable by discriminating buyers, while the maximum fixed prices raise them beyond the reach of masses.

The Government urge upon business men—not to work a bit later and a bit harder than usual—but to leave early from cities and to get home. To get home, *via* rail services that are darkened completely and whittled down to stage-coach level, motor-cars, of course, being rendered impracticable by the constantly changing regulations governing headlight shields, even when salesmen and others can continue driving on the rationed "pool" petrol.

Dangerous Strangle-hold on Most Raw Materials

Control of raw materials is seriously embarrassing many manufacturers. Even export manufacturers (and exports above all things are vital to-day) cannot get sufficient materials one week, whereas the next week the materials are released—after the exporter's business has been completely disorganized. Many lines are urgently needed to consolidate markets abroad where formerly we were in competition with enemy firms now pushed out.

There is growing complaint over the restriction of imports, a state of things

that, in its turn, inevitably jeopardizes exports. Restriction is put on imports, of course, with the idea of conserving gold resources, to force the public to economize in their spending, and to save space in ships.

An interesting comment on this was published recently by S. W. Alexander, well-known City Editor of the *Evening Standard*. Alexander said: "The position is being felt most seriously by concerns which are in what are described as luxury trades.

"Nevertheless it must not be forgotten that in the export trade these luxury, and in many cases necessity, articles are frequently the least bulky and bring the highest values. Accordingly they are the best exports we can possibly produce.

"One very important firm has been restricted in the importation of native Chinese silks. But this is how it works out—on every £100 which the company expends on purchasing Shanghai dollars to pay for the silk it pays an import duty of £100. On top of these costs the company expends £200 on British labour for printing, dyeing, and finishing. Putting on to the £400 a profit of 20 per cent, there is an exportable value of £480.

"As the company cannot get a licence to expend £100 in China, it has had to refuse export orders to Holland.

"Moreover, the country is deprived of an excess of foreign exchange which would have been received as a result of the carrying out of the business, and a trained staff is put out of work.

"This kind of thing is happening on a large scale. It is the result of the failure to recognize the intricacies of the British mercantile system."

There Is No Need for These Mistakes

Of these dangerous mistakes officialdom could have been warned, had advice been sought.

Skilled economists and experienced business men could have told them that since the days of Ancient Egypt a controlled price, for example, inevitably drives goods off the market, and that a maximum price just as inevitably lifts goods up to that maximum price and depreciates quality.

Far from our Ministerial control acting efficiently and economically, there is every indication that it is once again bureaucracy running riot and obstructing the course for legitimate business.

Already we have an embarrassing new national industry in the vast and still growing organizations of official controllers. More than forty prime materials have their controllers, complete with staffs and offices, and new controllers are still being appointed, almost daily. One cannot tell the exact numbers; it is impossible to keep track of their growth.

All these appointments, of course, have to give some evidence of justifying their existence, so businesses, great and small, are being deluged with a smother of forms. One investigator has assessed the number of forms so far let

loose at not fewer than two hundred and fifty millions, and they all have to be filled up—by business men whose time just now could be more usefully and profitably spent. And the form-planners and the official printing machines have not got really warmed up yet.

We know that in war many expedients have to be adopted and many difficulties suffered, but, even so, officialdom has not set a strikingly good example to business, nor made it very easy for business to push ahead on its own initiative.

There has certainly been every discouragement handed out to the business man courageous enough to follow his convictions that *business must progress and expand for the good of the country, especially in war-time*.

But industry must construct while hostilities are being carried on elsewhere. The resigned "victim of circumstances" attitude is a fatal one for any executive to adopt.

In the first month of war there was far too much precipitate closing down and paying off of staffs, especially among firms that were not prime producers.

Some of these employees have since been taken back, but not all of them—or anything like all of them.

Naturally, a war involves some sort of shake-up in personnel and methods. Adjustment, too, necessarily takes time.

But even war is not altogether without its benefits. For example, the adjustments in personnel which it induces lead the business man naturally to explore new avenues of economy in the way of better methods and equipment for doing work.

Many economies, forced by pressure of circumstances in 1914-18, became established business practice in the years that followed. It often takes an emergency to introduce an improvement.

But whatever economies or other adjustments to circumstances we have to make, let us make them in an actively aggressive determination for progress and not in a depressed spirit of retrenchment.

This May Prove to Be a Constructive Move

One definitely bright spot, announced, is the proposed formation of a Council of Industry to advise the Government on the management of industry during the war.

So far there is no indication that this effort will be led by professional Jacks-in-Office.

Representatives of the British Employers' Confederation and of the General Council of the Trades Union Congress are joining hands to meet at the Ministry of Labour to formulate a plan. It seems the best augury for industry yet.

In the meantime it is up to every individual business man to do his individual share of pushing ahead with a policy—not merely of "business as usual"—but of "MORE BUSINESS THAN EVER."

MANAGEMENT and War

BEFORE the war of 1914-18 little was known in this country of the work of F. W. Taylor and the American pioneers in Scientific Management. A few progressive employers, among whom should be mentioned Mr. C. G. Renold, had started to experiment with new methods.

Earlier in the eighteen-nineties there had been a burst of interest in what was then known as the "commercial organization of factories." A number of English engineers, of whom perhaps the most distinguished was Mr. J. Slater Lewis, had called attention to the importance of organization both here and in the American technical Press. But the challenge of F. W. Taylor's own invention of high-speed steel drove English steel and machine-tool manufacturers back on to problems of technical development. Management, as such, varied in quality from works to works according to the personalities involved but was, on the whole, essentially traditional and empirical. There was little or no recognition of the new technique which was evolving in the United States.

The necessities of war-time munition

By

L. URWICK, O.B.E., M.C., M.A., F.I.I.A.

Just now, more than ever, management needs men highly skilled and experienced in all phases of administration but who are, at the same time, detached from any limitation of internal precedent or tradition. These men can handle successfully the new and complex problems that beset business and the nation to-day

production wrought a big change. The various reports of the Health of Munitions Workers Committee were really a series of essays on the theme that bad physical and psychological conditions, excessive overtime and other faulty personnel practices inevitably lead to low production.

The Welfare Department of the Ministry of Munitions introduced many employers to new realms of thought as to the management of labour.

Some of the accountants who helped the Ministry on the costing side also

carried the modern idea of management to their compatriots. Over 10,000 copies of the late E. T. Elbourne's *Manufacturing Costs and Accounts* were sold. This book was wider than its title. In its later editions it still remains the most comprehensive study of Scientific Management methods written by an Englishman.

There was a general demand for the services of the few people available who understood the application of the new methods to problems of production control. By the time of the Armistice

(Continued overleaf)

BUSINESS: Its Special War-time Service to You

WAR is creating new problems for management. Conditions affecting production, plant and machinery, distribution, labour, are suffering upheaval. Schedules governing raw material supplies, hours of work, control of costs, direction of sales, are being drastically reshuffled.

Few manufacturers have any precedent to guide them in these new difficulties. Even those who were in business during the last war cannot rely entirely on past experience for guidance. Conditions to-day are not parallel with those of 1914.

The problems of 1914, however, beset the business man of that time just as the present trouble is setting its serious posers for the industrialist to-day.

BUSINESS then, throughout the war period of 1914-1918 and during the reconstruction years that followed, rendered incalculable service by providing a common pool (the only one in existence) of ideas, methods and means being devised and used to meet the complexities of entirely new industrial and business problems.

To-day BUSINESS is setting out to provide a similar service for business men who want, at once, accurate information and practical advice with which to meet the intricate situations now forced upon them.

No set of executives in any single firm can have a monopoly of ingenious ideas and quick adaptability to meet unusual situations. But in the mass of business organizations of all kinds throughout the country the aggregate of executive brains and ability provides a wealth and

By THE EDITOR

diversity of talent that is inexhaustible.

By continuously surveying this rich field of executive experience, and by bringing to a focal point an analysis of its various activities in meeting the present problems, BUSINESS will therefore provide for its readers a service that is both unique and valuable beyond all proportion to its modest cost.

Immediate problems that have already arisen in the average firm include:

1. Location and supply of raw materials and/or substitutes.
2. Finding, training and holding suitable labour.

THERE WAS NO ISSUE LAST MONTH

For the few weeks following the outbreak of war, so confused was the position of industry that it was impossible to define any lines of policy which business firms would adopt to meet the new conditions. Rather than publish matter which lacked the specific, informative character that is the basis of all articles in BUSINESS, we therefore withheld the October issue entirely. All readers' subscription accounts will be extended one month accordingly.

3. Getting increased output with existing plant and staff.

4. Maintaining output and efficiency with depleted staffs.

5. Holding down production and general overhead costs that show a persistent tendency to rise.

6. Finding ideas and short-cut methods of saving time, labour, and materials in every department of the business.

These are the broad heads under which BUSINESS will make investigations. These investigations will reveal the solutions devised and used by a wide range of the best executive brains in the country.

As new problems arise and changed aspects of old ones develop, BUSINESS will look promptly into them and will publish as soon as possible helpful advice as to their solution.

While this paper is already busy with plans to provide this valuable service we must at the same time explain to readers that we, too, are under some restriction. The rationing of paper, for instance, will compel our issues to contain fewer pages than normally. Also it may be necessary to avoid detailing the plans and methods used in some particularly interesting organizations, as publication of such information might violate the injunctions laid upon Editors by the Ministry of Information.

These restrictions, however, will not materially affect our purpose. Every month, therefore, BUSINESS will constitute a prolific source of really practical ideas and methods for the successful conduct of war-time business.

the Government itself had recognized that here was a new force of immense potential value to the country both in war and peace.

The Ministry of Reconstruction devoted a number of official pamphlets to recommendations to manufacturers to make the fullest use of these methods. Permanent form was given to the work of the Health of Munition Workers Committee by the establishment of the Industrial Fatigue Research Board, now the Industrial Health Research Board.

In the twenty years that have elapsed since, there has been steady progress in the study of management by private firms. A variety of Institutions, such as the Institution of Production Engineers; Institute of Cost and Works Accountants; the Management Research Groups; the Management Library; the National Institute of Industrial Psychology; the Works Managers' Association; the Office Managers' Association; the Purchasing Officers' Association; the Institute of Industrial Administration, and others, have developed special aspects of the problem.

These Skilled Administrators are Available

There are half a dozen firms of established Management Consultants, representing a reserve of highly trained men, fully experienced in applying modern methods of control to every kind of business situation.

Judging by the experience of the last war, this nucleus of men in the country who do understand modern management thoroughly can be of immense value in the national effort. Properly organized in teams of specialists, they could, for instance, undertake on behalf of the appropriate department the reorganization of the supply of any commodity of national importance where there had been temporary breakdown for any reason. They could get new factories started and organized, supplying groups of managers with the necessary knowledge and initiative to set things going. Once an organization is run in, it requires less attention, and the group could move on elsewhere.

Where an individual manufacturer, under quite unusual pressure as he is likely to be, was behind on deliveries, they could assist him to get straight with the department concerned by helping him to improve his planning and output. This form of liaison would be particularly valuable. The Management Specialist would act for the Contractor, but, provided the department was satisfied as to his competence and detachment, he would be in a much better position to iron out difficulties than either an official of a Ministry or one of the Contractor's employees.

Many of the "shadow" departments which have now taken on substance, are necessarily being organized somewhat hastily. The presence in each such department of a high-grade man with skill and experience in installing clerical and other systems in a large undertaking quickly and making them work, would prove an invaluable national investment. He would save administrators

How Firms Can Organize For

(a) Increased Output

(b) Lower Costs

will be explained by Mr.
Urwick in a special article
to appear in next month's
BUSINESS

work and worry, leaving them free to do their proper jobs. He would save the taxpayer unnecessary waste of money. He would save the subordinate staff the strain and effort of unskilled improvisation and clumsy pressure for output.

Much of the civil defence mechanism which has been built up by voluntary effort over the last two years has, inevitably, weak spots. Town clerks are overloaded with new and unaccustomed duties. One large public authority has already been forced to undertake a complete reorganization. Here again the trained management man can be of great value. He is accustomed to arranging shifts, defining duties and responsibilities, planning organization and effort—in short, to getting things going.

Unfortunately, the National Register was originally compiled on the basis of professional qualifications. And Scientific Management is too new a technique for its exponents to have worked out proper professional qualifications and organization. Thus, while Production Engineers were recognized, it was only at the last moment that a decision was taken to include other branches of management. And the principle of including those doing management work professionally as teams of specialists is still *sub judice*. Knowledge of how to use Consultants to the best advantage is naturally limited. There is a tendency to attempt to grab individuals of ability and initiative and to fit them into

extemporized official organizations as subordinates.

If this is done it will involve a serious waste of national manpower. The great strength of the highly-trained Scientific Management man is his *detachment*. Placed in some extemporary hierarchy in a comparatively humble position, he is likely to shroud his initiative in discretion and, in Kipling's phrase, "to muddy the wells of inquiry with the stick of precaution." If he is to save the taxpayer the millions which he can save him, he should not be asked to do so at the price of his own skin.

In general, the country's preparations for war have been a fine example of the art of learning from experience. We start the struggle with much machinery that, on the last occasion, was only achieved with painful effort towards the end of 1917.

The Civil Service and Local Government Officials deserve the utmost credit for the immense amount of ground which has been covered. It is hardly to be expected that in the first difficult weeks of war, when they are overwhelmed with urgent duties, they will have time to pause and to appreciate the significance of a highly specialized branch of knowledge with which their normal work in peace does not bring them into contact.

At the same time, it would be little short of a disaster if the small nucleus of men who really understand Scientific Management were not used to the full extent of their powers in the national interest. Those who are already organized in teams of specialists should not be asked to waste time and energy in learning to work to procedures which they know are wasteful and to which they are unaccustomed with men who do not understand or appreciate their line of thought. They should be used as specialists working with other specialists whom they know along lines which they have proved in practice to be sound and to yield results.

It is inevitable, later if not sooner, that the country will insist again that its latent resources in management knowledge shall be used. But the longer the delay, the greater will be the difficulty in reconstituting teams of specialists and in eradicating bad habits resulting from improvised organization. Difficulties cost money. And in the conservation of our national resources lies one of our greatest weapons in winning the war.

To Speed-up Repairs to Machinery

MANY firms are busy with work of national importance. To such firms the prompt repair of any broken machinery is vital.

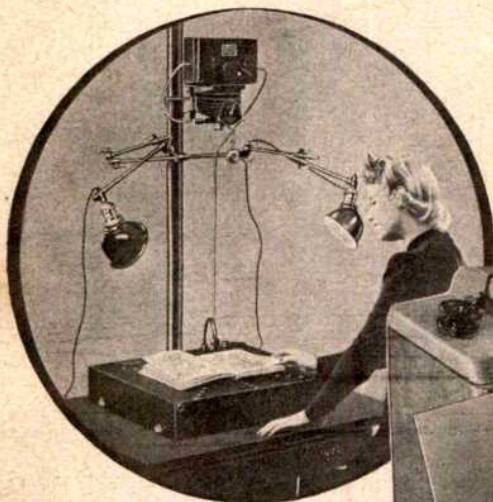
The Minister of Supply has already issued a Priority of Work Order. Barimar, Ltd., the well-known welding specialists, therefore emphasize to production executives that it will be in their own interests and will also facili-

tate delivery and avoid unnecessary correspondence if, when sending parts to Barimar for repair by welding, they state clearly the purpose for which parts are required, particularly when this is direct or indirect Government work, A.R.P., agriculture, foodstuffs or for any other public service. It will then be possible for the order to be given the priority to which it may be entitled.

How Modern Equipment is Offsetting Staff Deficiencies in These Firms

Reported by

BUSINESS Editorial Staff



Filming documents for record purposes is the modern way of saving vast amounts of time in manual copying and great space in files and storage. At any time the film can be 'viewed' in simple apparatus shown in the lower of the two pictures. Skilled labour is not necessary for operation of this copying apparatus, which is by Kodak, Ltd.



GETTING satisfactory production at really economic costs with a war-time staff sets some difficult problems for the management.

During war, staffs, for a variety of reasons, are thinned out and, in most cases, reduced in efficiency by the introduction of emergency personnel that would not ordinarily be included.

Whatever the pressure of business, whether still weak from the initial shock of new conditions, or whether at high pressure and still expanding, a firm without its old complement of trained and experienced workers is bound to find itself up against many new difficulties.

How some firms are, by means of modern equipment, meeting these difficulties and deficiencies will therefore be helpful to many concerns to-day.

The first example that comes to our mind is one that we have seen most recently: in fact only a day or two before closing this issue for press.

The firm concerned is making A.R.P. materials for the general market, not for Government contracts. If they were making for the Government there would not be any reason for the sales promotion activities that prompt us to cite the example.

Speed Was Essential to Capture This Market

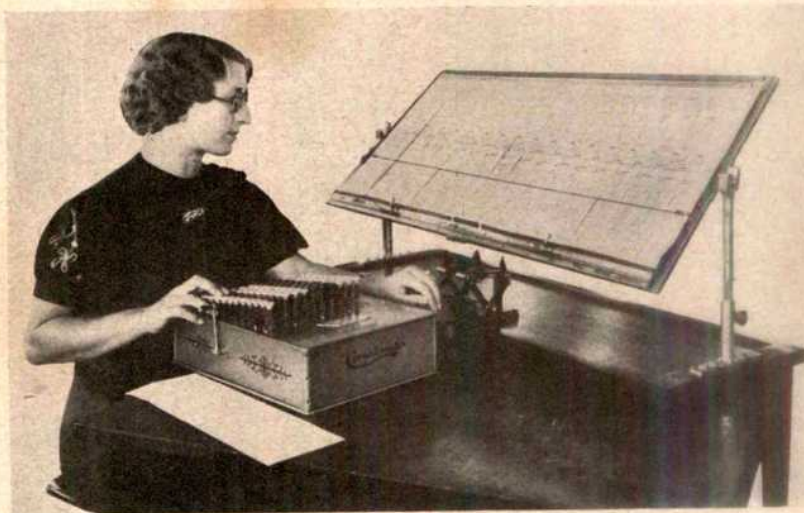
The firm are very busy. They are on a "snap" market. They have to work fast while the opportunity is at peak.

The firm consists of a selling organization with wholesale and retail stockists located throughout the country.

Their life-blood depends upon getting well-planned sales promotion matter pushed out in ultra rapid time so as to

keep their widespread distribution outlets working at pressure.

Before the war this firm was not making emergency products. It had a publicity and sales promotion staff that worked along traditional lines.



GETTING MORE WORK OUT OF THE PEGBOARD

A problem at the Northmet Power Co. was to get more than the usual number of forms on the Pegboard before making a total. In order to avoid breaking off to make a sub-total, the board has been arranged to take forms on both sides.

When the Comptometer operator has added a line on one side a small lever is pressed and the board swings right over, coming to rest in special catches so that the addition may be continued to the last form. The same easy operation takes place for every line of figures. Elastic bands on sliding clamps assist in making a correct analysis. The Comptometer operator in the illustration has just pressed the lever, and the board is swinging round so that the other side can be added.

The forms are Consumers' Accounts, and the analysis gives Fixed Charges, Units of Electricity at varying rates, goods purchased and on rental, hire purchase instalments, etc. Each section of accounts is easily and quickly proved before removing them from the board. This is done by extending the units in the total and reconciling the results with the £ s. d. additions.



One of a battery of special transportable safe cabinets for the custody of ledgers. It is watertight, anti-blast, and fire-resisting. The Ratner Safe Co., Ltd.

With this machine not only are its output-of-literature difficulties solved but its publicity staff problems are also banished.

All the creative work of designing, and the art work of preparing the plates for printing are done by the Rotaprint Service department. The firm, in its own office, at any hour of the day or night, can now turn out leaflets, illustrated folders, folders overprinted with dealers' names, price change announcements, sales letters, and so on, by the dozen, hundred, or thousand in a matter of minutes or an hour or two. One girl operator does the lot. The thin master plates are kept on file, and any one can instantly be put on the machine.

The managing director said to us: "This machine has put fresh life into our business. Together with our new mail-room equipment it has been the sole means of our being able to get the best out of our present market."

Removing 'Bottleneck' in Mailing Department

It would, of course, have been useless for this firm to have made such provision for sales promotion production if it had not also arranged for its prompt dispatch to destinations.

Delays in postal transit, too, made it more than ever necessary for outgoing post to be handled expeditiously.

Downstairs in its mail-room, therefore, this firm installed two automatic postal weighing scales (by W. & T. Avery, Ltd.). These scales give instant readings—in money—of (a) all letters and (b) all parcels. These cash readings save enormous time in a mailing rush of mixed units. Also they save the errors inevitable where calculations of postage from given weights are involved.

To keep this speed going a letter-sealing machine (by Block & Anderson, Ltd.) was installed, together with a

hand-operated postal franker (by Universal Postal Frankers, Ltd.).

Our own visits to this firm confirmed the fact that formerly the sales promotion staff regularly worked till 8 p.m. and that the mail-room was busy till 9 p.m. and sometimes later. Getting home in the black-out was a really serious problem with everybody.

The firm paid a high rate of overtime, so nobody grumbled on that score; but it was extremely costly to the firm, besides failing to achieve the best results.

Modern equipment has thus completely solved the problems. Six-thirty to seven p.m. is now the closing time, with far lower costs and better business achieved.

Another example of the value of modern machinery we saw in a wholesale drapery house, where the invoicing involves a great number of separate small accounts. In this firm the female clerical staff had been reduced from twenty-four to eleven. Here the work of three former invoice typists was being easily handled by one girl using a Burrough's Electric Carriage Fanfold machine.

"When we bought it we thought the cost was high," an executive of the firm remarked to us, "but when we saw how it enabled us to deal with the last week in September (billing, etc.), we were asking each other why we had not installed it long ago."

In other firms we saw still further instances of the value to-day of modern equipment in saving time and money. In most cases it was not equipment, as described above installed especially to meet the present emergency but equipment already installed that was being put to greater use.

For example, the manager of one department said how essential was their internal telephone since his firm no longer had any messengers to carry round the inter-office mail service of memos, etc.

Another firm had a small cash register



In factory or office more work with less fatigue is secured by proper seating. These are 'Evertaut' chairs

that was formerly used only in its dispatch department to control small payments of petty cash. Through staff shortage this firm centralized its petty cash from four points to one desk in the accounting office. The one cash register and one girl to-day handle the lot with ease.

In the basement of a warehouse where eight "handy men," with railway-type trolleys, formerly handled the goods, one army pensioner and a boy, with a second-hand electric lifting truck, now do the work with less exertion.

As time goes on we are sure we shall find many more instances of how the wider application of equipment is going far to compensate for the shortage or inexperience of the human element.

Raid-Warning Raises New Problem

Solved At Once by Adapting Modern Equipment

THE recent bout of enemy air-raiding over the northern part of Britain brought into being a new business problem.

When the raid warning sounded the staff of a certain well-known company dutifully followed the strict routine impressed upon all members to cease work and to file away immediately to allotted places in the dug-outs.

It so happened, however, that when the siren sounded the wages department was making up the week's pay and had £12,000 in notes and coin lying spread out on a table.

Well, there was a problem. The warning was a real one; everybody in the department realized that; so did the chief cashier, whose responsibility was the safe custody of that money. Nevertheless, he knew the legal requirement: everybody out at the earliest possible

moment after the signal. The money was, therefore, left entirely unprotected until the "all clear," more than an hour afterwards.

Resolved never to be caught like that again—especially in view of the likelihood of more frequent and more determined raids in the near future—this chief cashier at once called in the aid of a firm of equipment manufacturers specializing in the solution of management problems.

At once a simple modification to a piece of standard equipment was devised and installed in this wages department. Now, the entire sum of money, no matter how "spread out" it is for sorting or packaging, can be locked, just as it is, in a fire-proof container in about five seconds.

The total cost of this permanent protection of £12,000 was £110.

Financing a Small Business In the First Months of War

THE complete upheaval of normal conditions invariably created by the sudden onset of war naturally shakes the small business far more seriously than it does the big concern.

The bigger the organization the more internal "substance" there is to absorb the shock and help bridge over that dangerous period which intervenes before war-time conditions become more or less clarified and business can become adapted to the change.

Our business is textiles. We are wholesalers on a small scale, and we also have—or rather *had*—four retail shops of our own.

When war broke out the most serious blow we suffered was the complete collapse of the supply of some of our best-selling lines. These goods were special lines of novelty textiles from Middle Europe. With them we had built up a very wide trade and had become well known in this particular connection among important buyers in the big retail organizations and stores throughout London and the Home Counties.

We had no worthwhile stocks of these materials in Britain, and this factor, plus the almost complete halt in business generally through the black-out and other A.R.P. restrictions, compelled us to accept the situation as pretty hopeless.

With a small firm such as ours (a partnership consisting of myself and two others) it is often the case that no substantial cash reserves are available. We had extremely little at our command. The vitally urgent question was, then: How could we keep our business above water?

Obviously, expenses had to be cut,

and *at once*. This brought us face to face with two places at which to apply the axe: (a) premises, and (b) staff.

It was our sincere desire not to inflict on our staff any more hardship than we could possibly help. The majority of our people had been a long time with us, and our spirit of comradeship was strong everywhere. We realized, however, that the war would make domestic demands on some of the staff and that a number of them might prefer to be released anyway.

We Made Staff Reductions Without Inflicting Hardship

Our first move, therefore, was to call all the staff to a meeting one evening early in the week after war was declared.

We clearly outlined the position and explained that if everyone who, for family reasons, considered they would want to leave now, or in the near future, it would ease matters considerably if they would notify the management at once.

The result of this was that a number of juniors (girls and young women) left to accompany their families who were being evacuated. A few of our young men were in the Militia, and they gave in their notice, too.

This arrangement so eased the pressure that we were able to close at once three of the retail shops and accommo-

date what remained of the staffs from the three shops in the remaining shop and head office.

Thus we were able to make an immediate saving on overheads and wages, the latter without inflicting undue hardship on anyone.

The next serious problem was our creditors. We had considerable money due for payment out; and, of course, we had a useful sum in receivables.

Letters began to arrive from creditors, asking for payment as soon as possible. We ourselves sent out a carefully drafted collection letter to our own customers and simultaneously tackled the question of creditors.

• These creditors we divided into two main classes: the big ones and the little ones.

As no doubt many business men have experienced, we found that the little creditors (for amounts of, say, £5 to £50) were the most restless and pressing, while the big creditors were by no means so embarrassing.

What we did, then, was this. I, personally, visited *all* our big creditors and by friendly negotiation arranged for a very helpful "time payment" arrangement. We spread payment of these existing debts over an agreed period and in the meantime arranged to pay cash for any further supplies taken.

With this considerable advantage in our hands we then set about settling the little fellows. Through the "ease-ment" on the big accounts we were able to settle up most of the little fellows with cash. With the remainder we made individual arrangements that were more or less satisfactory, sufficiently satisfactory, anyway, to relieve any serious pressure.

Where You Reap the Benefit of Goodwill

At this point I feel I should mention that it is at times like the present that a business man does reap the benefit of goodwill built up patiently over a number of years with suppliers and customers.

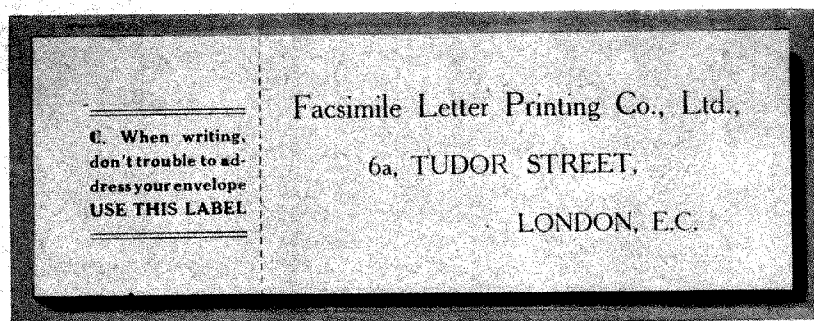
All through the fifty years' existence of our firm we have been proud of our policy of prompt payments for supplies and of considerate treatment and good service to customers.

This policy has now come home to roost.

We received the most courteous and generous treatment at the hands of our big creditors. Our debtors, too, responded magnificently.

Well, that at least gave us a most

A TIME-SAVER



Everything that can save time and work in the office is worth considering. Here is an idea that saves envelope addressing.

This printed gummed slip is attached to outgoing mail, to catalogues, folders, direct-mail matter, and so on.

Not only does the provision of this slip assist business firms to which it goes, but to the general public it is also a help: it is just another of those little things which make it easier for the customer to write and send in his order.

The business reply paid envelope of course serves a similar purpose, but there are many circumstances in which it is preferable and more convenient to use this gummed slip idea.

urgently needed breathing space, and after another week we again had to review the question of staff.

We still wanted to avoid doing any compulsory "firing," so once more we notified our employees that if any one *could* conveniently move to other spheres, we would provide all the help that we could towards that end.

A few more young men left for various Services, and one or two more of the women joined their families in evacuated areas. In addition to this we did have to get rid of two salesmen and one married woman in the accounts department. We decided on the latter dismissal because we discovered quite by accident that her husband had recently been located in a reasonably good job.

Finally, we very regrettably made an all-round cut in salaries of 10 to 15 per cent, the very minimum we could manage. On our own part, the partners and I had, right from the outset, agreed to take the drastic reductions that the situation demanded.

The net result of these arrangements put a much better complexion on things.

Now, however, we wanted more cash. For further supplies of goods from home manufacturers we had to pay "hard" money.

Even To-day a Bank Manager Can Help

My next visit, therefore, was to our bank manager. I took with me a complete schedule of the economies we had made, as well as a balance sheet of our revised financial situation and proofs of the firm orders we had in hand.

Here, again, sound business policy built up over the years stood us in good stead. The bank manager was by no means favourably disposed at first. He, personally, understood our position and knew our worth and potentialities. But he had had standing instructions from his head office, and these instructions did not encourage the enlargement of credit facilities at the outbreak of a war.

However, our reputation as customers of the bank for a long time and the business situation as we had handled it were not without effect on him personally, and he agreed to go further into our request.

Within four days the manager called me to visit him, and he agreed to extend credit for a short "emergency" time: the situation to be again reviewed at the end of that time.

That was a godsend: it made us still more "fluid." We wanted cash because we had to go on buying, and we urgently needed to buy because *sales were coming back*.

At the end of the third week of war we were doing better than we had been doing for twelve months past! Our remaining retail shop was busy, and the wholesale was getting a move on that amazed us.

At the moment of this interview we are still doing brisk business. The only cause I can see for this is that buyers are active to take advantage of the

market (we have not yet raised prices) while prices are still as they were and while quality has not yet been necessarily reduced.

If those reasons really are the ones prompting this welcome spurt then I fear the revival will be but short-lived. But it is sincerely hoped, of course, that it is no such mere flash in the pan but rather the beginning of a steady movement in trade.

For a full year before the war the uncertainty of crisis after crisis was a serious deterrent to our trade. Now, with the war here and the expected air menace seen in a different light, there seems to be less uncertainty and more of a likelihood that business will again get going.

What we have done is to transfer all stock from our closed retail shops to the one remaining open. We have altogether dropped the idea of our Middle European goods and are specializing in the lines manufactured at home—and, at the moment, as I say, we are doing very well.

Buying has to be done in two North of England towns, and hard cash has to be the basis. I arranged with our London bank, therefore, to make my cheques cashable in the two Northern branches. I did not fancy the idea of carrying cash in my wallet in the very dark and very crowded trains which the traveller now has to suffer.

The two sales representatives whose services we dispensed with worked in territories far distant from London. The extent of their areas made cars essential, but the petrol rations were totally inadequate.

We are now keeping these territories alive by the use of direct mail. For this purpose we engaged a young man experienced in this work. We are, however, keeping this effort strictly economical. We are watching its costs

and its effects. If it proves unjustified we shall drop it.

We are also watching the petrol situation. If the Government allow salesmen a more reasonable ration we shall, if business otherwise warrants it, reinstate the salesmen.

Vital Need is to Keep The Business 'Liquid'

In the meantime, my partners and I are concentrating our efforts on keeping the business as "liquid" as possible. We are holding down internal expenses and, above all, booking orders for cash wherever that is possible, or for the shortest credit term acceptable where a cash basis is impracticable. We stress the point to our customers that we ourselves are having to pay cash, and I must say that the bulk of our customers do their best to co-operate with us.

We give a special discount for cash, but it is well worth while.

Looking back on the situation now it is quite obvious that if we had not acted so promptly in cutting our outgoings, collecting our receivables and getting even very short-term help from the bank our business would have sunk during those first few weeks.

The sharp up-turn in trade, too, helped enormously. If that had not occurred we should not have done more than just weathered the storm. We are, however, prepared now for the possibility of that spurt being only temporary. Our expenses are trimmed to the bone. We have put our improved position before our bank, and they are very gratified about it. We have learned this, too: banks nowadays may be pretty "tough eggs," but, provided you have treated your bank well in the past, it does pay to give your confidence to your bank manager when things are not so good.

More Catalogues Should be Like This

Here it is -

- IT WILL PRINT 5,000 COPIES PER HOUR each a perfect example of facsimile production.
- IT INCORPORATES AN AUTOMATIC FEED adjustable for all types of paper, forms and cards.
- AN EFFICIENT INKING SYSTEM IS INCLUDED enabling additional inking to all or any part of the sheet.
- ADJUSTABLE FENCES & PAPER GUIDES ensure perfect alignment with speedy operation.
- A TIME SAVING RECEIVING TRAY permits instant pick-up of printed matter without rumbling.

10,000 Letter Headings
10,000 Form Letters
5,000 Report Sheets
5,000 Price Lists
3,000 Cost Sheets
2,000 Estimating Forms

IN ONE 8 HOUR DAY IT WILL PRODUCE

To print these, even by the cheapest method would cost £7 18 0.
For less than the cost of one day's work you can purchase the

PERMAPRINT

THESE catalogue pages constitute an ideal example of printed salesmanship: a fine economy of words and illustration that set out *only* those things the prospect needs to know. Absent are those wordy vapourings, those clichés, meaningless superlatives and irrelevancies that clutter up far too much space in the average catalogue and serve to detract from, rather than add to, the prospect's interest.

Read the points carefully. See how the compiler has set down in logical order (a) clear, simple illustration of the machine; (b) plain statement of its outstanding points; (c) figure-facts of what the machine will do in a given time; (d) what it costs.

If any reader of BUSINESS thinks this is not an ideal example of what printed salesmanship *should* be, we shall be interested to hear his reasons for that opinion.

THE TREND OF TRADE

Marketing—Advertising—Selling

Making The Best of It With Bureaucracy Running Riot!

SINCE last writing, war has changed the face of the world, of Britain and of business.

The refugee half of England has probably increased its population by two million, while London and the Eastern industrial centres have lost the same number of people. Overnight greater changes have taken place even in the South-East than were known during the whole post-war expansion period, 1919-1939.

No less startling are the turns of fortune experienced by individual industries. Normally successful trades are in distress, while some of the Jonahs of industry enjoy a boom. So prosperous, highly paid advertising has an army of two thousand unemployed technicians, while the coal industry takes on more miners every day, plans a 15 per cent increase in output.

An E.P.T. of 60 per cent and a 7s. income-tax has been clapped on to industry before it has had time to expand its profits from the rather poor level of 1938. The cart has been put before the horse with a vengeance by a Chancellor whose forty years in the law have given him so little time to grasp the first principles of finance or economics.

Come on Business: Assert Yourself!

BUSINESS remains no less vital to the nation, but the importance of the individual business man has shrunk, partly through his own lack of initiative. In too many industries one finds a lack of leadership, a failure of those who should lead to grapple quickly, ingeniously and courageously with new problems.

Trade Associations bear particular responsibility. Why evacuate to some small provincial town what should be the mainspring of an industry's organization? The frequent need for swift action at the seat of government condemns these unnecessary flights.

While too many business leaders and trade organizations have been out of town Government departments have been busy. Already the Minister of Supplies controls all the raw materials and some of the industries concerned with iron and steel, non-ferrous metals, silk and rayon, timber, paper, leather, molasses and industrial alcohol. This is apart from the control of prices in

INDUSTRY COMPLAINS THAT:

1. 'Pooling' is being carried to absurd lengths
2. Prices are being unscientifically and ignorantly fixed
3. Control of materials: imports: exports is too rigid and is jeopardizing the nation's trade
4. A.R.P. expenditure is still too high
5. There's danger of inflation: the country's worst peril

*Writes CECIL CHISHOLM, M.A.
Business Economist*

all these industries as well as for jute, cereals, molasses and solvents, tea, canned meat, and a wide range of foods. We already have standard petrol; on the way are standard tea, standard prunes, sausages, meat pastes: only by good fortune have we escaped the standard cigarette.

The first of these simplifications military needs make essential, and no one will quarrel with it. The others are indefensible and will kill many sound brand names quite unnecessarily. Simplified practice—yes; standards of size and quality—yes; the loss of identity—NO, should have been industry's reply.

Moratorium Would Have Helped Employment

AS usually happens, financial control was more expert and far-sighted than industrial control. The exceptions were the panic increase in bank rate, now cancelled out, and the failure to institute a brief moratorium for the medium-size and small business. Both have made it difficult for the smaller house in every industry to carry on.

A two or three months' moratorium on large payments would have enabled these concerns to husband their resources, to spend on wages the money now going to large suppliers. But with

dearer money and no protection from creditors, such as the Government has secured for the great houses, the small concern was compelled to dismiss workers and use its money during the switch-over from peace- to war-time lines to pay creditors. It would be difficult to assess the amount of unemployment caused among clerical and technical workers because of this situation.

These Trades Feel the Pinch

IT is true that there are 76,000 more men employed than a year ago, that there are 175,000 fewer women at work, and the people generally affected are not registered workers. The most hardly hit trades are hotels; many still stand empty (awaiting Ministry staffs), shops, cinemas, sports industries, newspapers, advertising agencies, luxury manufacturers of every sort, and those industries making non-essential goods for which important ingredients have to be imported, e.g., cosmetics. No doubt unemployment will reach vanishing point in a few months' time, as the Minister of Labour explains, but the period of readjustment is going to be unnecessarily difficult.

With the control of materials and prices in general, business can have no serious quarrel. Any failure to hold

down prices will simply mean inflation. But the settling of prices so far has been fantastically improvident, not in one but in a dozen industries. In some cases makers are being asked to sell below their mere cost of production; pooling means the compulsion of shops to sell high goods lines at cheap range prices—again at a dead loss.

Trade Bodies Missing Chances to State their Cases

ON the other hand, the popular Press has shown a deplorable ignorance of the A.B.C. of business, attacking many retailer trades that are merely passing on increased wholesale and insurance costs. Here, again, trade associations and individual manufacturers and retailers have shown a startling inability to get together, to state a case, to use the avenues of publicity open for putting themselves right with the public.

Are you giving sufficient of your own attention to your trade association's work? In peace-time the work of associations can often be done by second-rate brains; in war-time it demands the best ability in the trade to cope with the many complex and dangerous problems demanding the urgent answers that only great experience and executive ability can frame.

Study Germany's Export Markets!

WE have reached in seven weeks the state of control only realized after four years of war in 1918. This is brought home acutely by the embargo on the export of many products to neutral countries. What wonder if exports for September are 42 per cent below the 1938 level, and imports nearly 30 per cent below it. The lessons of the last war have been learnt. As a result the exporter is confined to a much narrower range of markets. But he needs far more help in getting raw materials, export licences and shipping space.

Even so, this is the moment to study carefully exactly what Germany is doing in your lines in every part of the world, for the British blockade, combined with a shortage in raw materials, is going to reduce German exports to a negligible quantity.

Further, the war should enrich the American and South American markets, as did the last. It may be possible to sell certain semi-luxury lines there for which the demand is drying up at home. Despite so much Government restriction, it has to be remembered that every assistance is being given to firms exporting anything from coal to a tennis ball; and the Empire markets have a bias in our favour at the moment.

Raise Output: but NOT Prices

THE two big problems (outside the hard-hit luxury and service trades) are to secure output and to avoid price rises.

The cost of living rose by 9 per cent in September. Upwards of 2,000,000 workers now have their wages governed by that index. Already 200,000 cotton spinners, 150,000 cotton weavers, 80,000 dyers have been promised rises amounting to from 9 per cent to 12½ per cent above current rates. Another cause of rising prices was the rocketing of American raw material prices by around 20 per cent since last September. These higher wages and raw material prices are only two of the allies of inflation; a third is bottleneck in production where war and civilian demands compete; a fourth is the far too lavish Government and municipal expenditure on safety for civil servants and on every branch of A.R.P.

Trouble From A.R.P. Expenses

THE failure to reduce A.R.P. expenses six weeks after it was obvious that the full staff of wardens and fire and ambulance staffs would not be required immediately is incredible. Any normal business would have cut these costs by 70 or 80 per cent after the first ten days without risking

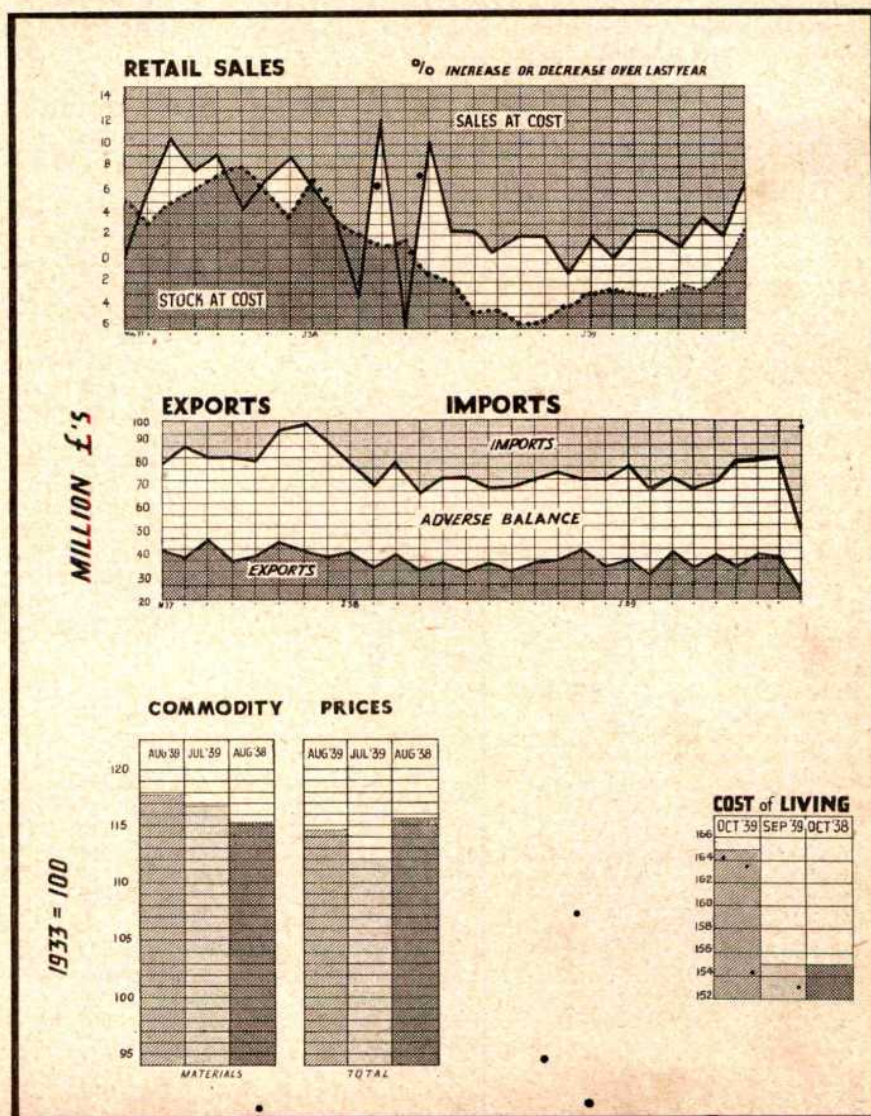
an additional hair of anybody's head. And we need the money. How much we need the money is shown by the Draconian first war budget.

Possibly any serious rise in rates due to A.R.P. official carelessness may be countered by the eventual saving on local assistance for complete employment. But that is not here yet. What the ratepayer needs is lower rather than stable rates to offset the inevitable increases in prices.

Decentralization May Hurt West End Stores

THE latest figure for shop sales available, that for August, shows a rise of 6.4 per cent. This means satisfactory sales all over the country, except in West and Central London, which registered a fall of over 3 per cent. Since these figures were achieved four leading London concerns have passed their preference dividends, and at least a million people have left London, many of whom will never return.

Quite apart from the attractions of country life to their people, many businesses will find that they can function



as successfully in a small centre as in London. Many will actually save on transport and administration. Further, it seems reasonable to suppose that the Government will rather encourage than discourage decentralization from London after this experience. So the future of the West End stores is far from bright.

New Marketing Conditions To Be Met

MEANTIME marketing has to adjust itself to the uprooting of nearly 5 per cent of the British population at home, to the increasing drain of men overseas, to the splitting up of family budgets into two and even three parts.

Fortunately, the distributive system will quickly adjust itself to many of these troubles. In some cases it is clear that permanent camps will have to be built to accommodate large numbers of children in certain country areas. Also, further retail outlets will have to be supplied to some of the rapidly expanding refugee centres.

At the same time, many London and provincial shops, particularly those selling luxuries, will have to close down. All this will cause temporary distress and localized unemployment during the next few months.

The Three Major Problems

FOR the rest, the problems of securing materials and men, of finding transport for the goods when made, and of keeping down prices, are uppermost and will continue to be uppermost. In the long run the hardest nut to crack will be prices.

At the moment temporary unemployment and controlled prices are exercising a deflatory effect against higher wages, shortages, bottle-necks and Government expenditure. When employment becomes almost general, the price problem will be the bugbear, for unless prices can be controlled our limited ability to export will let loose the danger of inflation upon us.

American Boom Won't Help the Situation

THE inevitable American boom will greatly aggravate the situation. Already this is on the horizon. Steel output is up to 90 per cent of capacity, freight and car loadings have greatly increased, motor-car production is at last soaring, steel prices are rising. Coal output is up 17 per cent over a year ago, foreign orders are rolling in from the Allies since the Senate passed the Neutrality Act Amendment. Can anything stop commodity prices continuing to rise under these conditions?

Yet inflation through high prices of finished products would be the worst calamity that could befall the country. Not only would it ensure a disastrous post-war slump but re-valuation would ruin the middle-class buyer and the smaller business.

How is inflation to be avoided? High money rates, heavy taxation, discouragement of luxury trade, and most effective of all, rationing, will all be used. Will they suffice? That will depend a good deal on our military progress in the war, on the extent of the American boom, and on the much greater skill and efficiency with which price control and rationing are applied. Too low nominal prices will supply contract supplies, creating scarcities—and eventually really dangerous price rises.

Business Can Stave Off Inflation

EVERY business man can do something to avoid the spectre of inflation. Each success in keeping down our own costs and prices is a direct assistance to our customers, and therefore to the whole community. Fortunately a full order-book is one of the greatest weapons in keeping production costs low. Skilled management alone can ensure its full powers being utilized under the present difficult labour and supply conditions.

Business in The War Points That May Affect You

Transfer of Enemy Patent Rights

AS in the last war, an Act has been passed to enable the Patent Office to deal with applications from firms seeking licences to take over enemy patents, designs, copyright and trade marks.

Already many inquiries from prospective applicants under the Act have been received by the Comptroller, who will not only have the power to grant a licence for the duration of the war but, if he thinks fit, for the remainder of the life of the particular patent or copyright.

Licence holders will have to pay over a portion of their profits from the sale of any such article, as a royalty, to the Custodian of Enemy Property.

The Court is situated in the Patent Office in Southampton Buildings, Holborn, London, W.C.

Trading With Enemy

COMMUNICATIONS for the Trading with the Enemy Branch (Treasury and Board of Trade) whose offices were at Western Galleries, Imperial Institute Road, South Kensington, London, S.W.7, should now be sent to:

Trading with the Enemy Branch (Treasury and Board of Trade), Alexandra House, Kingsway, London, W.C.2. (Telephone No. Temple Bar 8020.)

Enemy Firms Named

NAMES of 278 persons and firms listed as enemies, with whom it is illegal to trade, have been published by the Board of Trade.

The list includes such concerns as Krupp, with branches in three countries; Siemens, with thirteen foreign addresses; A.E.G., eleven; Osram, with four, and Agfa or Agfa Foto, also with four.

Products affected include electrical accessories, photography, shipping, tobacco, automobiles, railway materials, telegraphic materials, seed exports, steel, linoleum and binoculars.

Neutral European countries figure largely, Greece having eighteen banned firms, Denmark and Finland eleven, Norway fourteen, Holland, Bulgaria, Portugal, Belgium and Switzerland ten each, Argentina thirty-five.

It should, of course, be understood that inclusion of Osram and Siemens indicates the German, not the English, firms.

The Osram lamp is made by the General Electric Company, Ltd., in England entirely out of British materials. Osram companies in the list of enemy concerns (subsidiaries of the Osram Company, of Berlin) have no connection, financial or otherwise, with the G.E.C.

The Siemens group referred to are branches of Siemens and Halske and Siemens Schuckert Werke, Berlin, and not of Siemens Brothers & Co., Ltd., London

and Woolwich—a British-owned firm—or its subsidiary, Siemens Electric Lamps and Supplies, Ltd., London and Preston.

Don't Consign 'To Order'

MINISTER of Economic Warfare warns firms against shipping goods to neutral countries in Europe consigned "to order" or without naming the consignee.

While this may be normal practice in certain trades, it is likely in the conditions now obtaining to lead to difficulties and delays in the examination of cargoes for purposes of contraband control.

The Ministry is housed in the premises of the London School of Economics, Houghton Street, Aldwych, W.C.2, to which address all communications should be sent.

Delay in Mail Deliveries

IRRREGULARITY in receipt of mail to and from the U.K., due to transport difficulties and censorship, has inconvenienced many people at home and abroad.

If certain regulations are observed, however, newspapers and letters can be sent to and received from all countries except Germany without undue delay.

To prevent the enemy from communicating in code through newspapers, etc., leaving the United Kingdom, a permit is required to post any printed or pictorial matter to places abroad other than British Dominions or Colonies, the United States or France. Permits are obtainable from the Postal Censor Permits Branch, Post Office Censorship, Aintree, Liverpool.

We MUST Plan Now For More and Bigger Export Markets

THAT exports pay for imports is a fact that is important enough to observe, even in the leisurely time of peace. But in war-time, and in war for such a purpose as we fight today, it is a fact that should become a command: "Export To Pay For Imports" is the injunction we should set upon ourselves.

This is not an article of statistics. The columns and columns of export and import figure comparisons issued in normal times by the Trade and Financial Press and published in admirable form by Government departments are considered dull and receive far too little attention. This is rather an article of exhortation; *Export* to pay for imports on which we more than ever depend in this emergency. Export trade is, literally, the second line of this country's defence.

Prosperity, our urgent need of the moment, is gauged in volume of export, whether of raw materials or finished goods. True, we are engaged at home on a colossal manufacturing programme of armaments. But with all those hundreds of factories busy on an extremely wide range of products, that is not prosperity. Such activity certainly helps temporarily to promote internal purchasing power, but it is a form of national spending that is entirely non-productive and inevitably must be repaid by industry and the individual citizen in the form of increased taxation.

It can be realized, therefore, that no new national wealth is thus created: it is merely a matter of concentrating into more restricted channels that which already exists.

What Exports do For National Finance

On the other hand, the simple economics of an export transaction is that it leaves behind in the exporting country a new and additional profit. In turn, the credit created abroad by such exports enables the exporter from overseas to make a gain on the shipments he makes to us, thus increasing the all-round purchasing power between the countries.

That is stating the matter in its simplest form. It is elementary, but many business men who have not yet considered the development of export markets may not have thought about it.

British industry is on a war basis, and the export business has of course come under Government control. The regulations of this country are far-reaching and extraordinarily well devised. But the business man seeking export markets for the first time cannot now go ahead more or less as he likes.

Before any attempt is made to export, a Government licence must be

From an interview with

W. T. DAY

Secretary, The Institute of Export, London

Exports are our second line of defence. Not only must we expand our markets so as to develop this line for war-time, and after: but, stresses Mr. Day, we must face the urgent matter of TRAINING MEN for export business

obtained. To apply for this the exact nature of the goods to be exported, their destination, and the terms of the proposed transactions must be submitted for approval to the Export Licensing Section of the Board of Trade, at Inveresk House, Strand, London, W.C.2.

Rules and Regulations for the Exporter

Here are some of the regulations with which the Exporter must comply:

1. Applicants for export licences are requested in their own interests to fill up the form A, Sheet 1 and 2 fully and correctly, and to give as long a notice as possible of their desire to export. In particular, they are advised not to put in hand the production of goods which will need to be specially manufactured for a particular order unless and until the export licence has been granted. In other cases, however, applications should not be made more than two months before the proposed date of shipment.

2. All the requisite particulars as to the goods to which the application relates should be given on the form itself except as provided for, and not on a separate sheet or covering letter. Separate applications should be made for specific licences to export different classes of goods.

3. Reference Numbers.—For convenience of reference, applicants are recommended to date and number their applications and to quote date and number in any further communication (as well as the Official reference number, if known). Further communications can be dealt with more expeditiously if they relate to one application only.

4. Rules to be observed.—In order to avoid delay the following rules should be carefully observed:

- (a) Not more than one item should appeal on each line provided in the table.

- (b) Where the number of items exceeds twelve lines three copies of a schedule giving the requisite particu-

lars should be furnished instead of including them in the table.

- (c) The information required under each heading should be given as accurately as possible.

- (d) Quantities and values must be given in British denominations. It is not enough to indicate quantities by vague terms such as "cases," "barrels," "bags," etc.

As an instance of the importance of Export, many export managers will shortly be added to the list of more than 80,000 scientific, professional, and technical experts who have sent in their names for inclusion in the Central Register of experienced people who could give special service in war-time. A new section of the register for these men is being compiled. The Institute of Export are co-operating with the Ministry of Labour.

Although details of the work they will be required to do in an emergency have not been disclosed, it is understood that the Government plans may include the establishment of a central panel to classify and control exports. The continuance of our export trade in war-time in order to maintain essential credits abroad is of vital importance.

The After-War Position Must Be Safeguarded

Full guidance in regard to all the war-time regulations can be readily obtained by the prospective exporter, but the point I earnestly want to urge here is the vital need, *NOW*, to plan for export trade expansion *after the war*.

Britain must not be confronted with the perilous condition of lost export trade that contributed so tragically to the slump that followed the conclusion of the last great war.

The Government regulations that today control all export activities are by no means solely restrictive measures. True, they are restrictive in the sense that they do not permit indiscriminate trading abroad, but a great many of the conditions which they have introduced

(Continued on page 30)

THE
ALL-BRITISH

POWERS

PUNCHED CARD
ACCOUNTING

Is your staff depleted?

Now, more than ever, Powers punched card accounting methods are rendering invaluable service to the industry of this country.

FROM THE OFFICE MANAGEMENT POINT OF VIEW, INDUSTRY AND COMMERCE ARE FACED WITH THREE MAIN PROBLEMS.

1. The shortage of trained clerical labour which—already serious—will become more pronounced as time goes on.
2. The difficulty of co-ordination of records on account of removals and decentralisation of staffs.
3. The re-adjustment of accounting methods to meet the changing conditions in which industry and commerce are now called upon to function.

POWERS PUNCHED CARD ACCOUNTING PROVIDES THE EFFECTIVE SOLUTION TO THESE PROBLEMS FOR THE FOLLOWING REASONS:—

1. In the Powers system, each transaction is recorded as and when it originates by the fastest known method, i.e. punching a card. This, the only manual operation in the system, is performed by junior female staff. The subsequent operations of classifying and tabulating the punched cards are performed by machines. Thus the Powers system demands the absolute minimum of skilled labour.
2. The operation of punching the cards can be decentralised—inexpensive hand punches being available for this work. The punched cards occupy little space and are easily transportable. The tabulation of these cards to produce the required records can be performed at any convenient time or place.
3. The flexibility of the Powers system enables the information punched in the cards to be tabulated in any form required. Furthermore the system is adaptable to all types of work. Many Powers installations are already engaged on such work as Invoicing, Accounts Receivable and Payable, Stores Control, Gas, Electricity and Water Billing, Fuel Rationing Control, etc., etc.

The installation of Powers Equipment need involve no capital outlay as the machines may be rented on very attractive terms.

Mechanisation of office work today is imperative. Let us show you, without obligation, what Powers methods would mean to you.

POWERS PUNCHED CARD EQUIPMENT IS ENTIRELY BRITISH; CONSEQUENTLY SUPPLIES AND SERVICE ARE ALWAYS AVAILABLE.

POWERS-SAMAS ACCOUNTING MACHINES, LTD.
POWERS-SAMAS HOUSE, HOLBORN BARS, LONDON, E.C.1

Most Retailers to-day Run a Department Store, but Few Know which Departments Pay their Way

By P. A. BROWN, Sales Manager
The National Cash Register Company Ltd.

PRACTICALLY every retail shop to-day really consists of several shops under one roof. This does not necessarily mean separate window display space or even a sharp division of floor space as would be the case in a large department store, but it does mean that some lines are often sold at losses which have to be made good by more profitable lines if the business is to remain solvent. Most shops stock various classes of merchandise which carry widely varying ratios of profit.

Most businesses are departmentalized whether their owners realize it or not; the great drawback is that the records are not, in the majority of cases, departmentalized so as to show the actual earnings from the merchandise stocked. A moment's thought will show this to be true. Take the garage business, for example. The average garage sells petrol, oil, spare parts, service, cigarettes, and in many cases operates a café or refreshment counter as well. These are really departments; half of them may be losing two-thirds as much as the other half are able to make.

A licensed victualler's business is one of many that might be cited. He sells at different prices in various bars, sells small quantities of bottled goods at different prices from full quantities, runs an off-licence with delivery expenses, sells snacks and in most cases does a restaurant business as well. Without the proper department records he can only guess where he stands as to any one of his activities.

You Can't Plan Profits if You Don't Know Expenses

One of the great drawbacks to a business without proper records is that the retailer cannot tell whether or not his assistants are earning their keep. Proper records disclose some remarkable facts in this connection. The average retailer invests more money in assistants' wages than in all other expenses combined. In other words, this factor alone is more important to him than rent, rates, light and heating, miscellaneous expenses, depreciation, office expense, taxes, insurance, delivery vans, telephones and advertising.

To know what he gets for his investment in wages the retailer must have some means of measuring or weighing the ability, industry, accuracy and honesty of every employee. How can he fill this large-sounding order without enormous detail work?

He can fill it by adopting a scientifically planned cash register system that

fits the individual requirements of his business.

Successful retailing boils down to two basic factors: the stocking of lines that can carry their own overheads, and the employment of assistants who pay their way in the business. Only a modern, properly operated cash register system will supply the retailer with exact information on these two points. Skilful buying is of no avail unless the goods are properly sold.

Every assistant should have his own cash drawer in the register, and every transaction which he handles for the shop should pass through it. Experience shows that a four-drawer register built to issue an itemized ticket is the most successful model to achieve the purpose. These registers are extremely flexible, and where assistants make sales involving more than one class of merchandise the register automatically classifies the amounts under the class of goods sold, at the same time giving the assistant credit for the sale.

These registers also automatically show the number of customers served with each class of goods and the number of customers served by each assistant. Employers are sometimes startled to find that their lowest paid assistants

are doing the bulk of the shop's selling. If the total sales are divided by the number of customers served the average sale per assistant can be determined. Knowing the average sale is an extremely important point in any business. This is too large a subject to go into here except to point out that, as shop expenses are more or less static, any profit earned by increasing the average individual sale is *net* profit.

Retailers know from their purchases how much they have invested in stock in their various departments, but they have little means of knowing in detail the results of their investment. The information which a modern cash register will supply about the total sales in every department will give them immediate and accurate knowledge on this point.

Nine Ways to Build Bigger Profits

Here are a few of the things a retailer can do to build up sales and increase profit in a department after he has obtained the information described above:

1. Sell more lines which carry a higher profit.
2. Increase or adjust margins, where needed.
3. Apply more sales effort to a department.

(Continued on page 30)

The detail strip of this accounting system for retail transactions gives these key facts on which the business can be visibly controlled. It installs accuracy in place of guesswork

Cash Sales.
00261 Csh - ***36.14.6-
00261 Csh - ***59.10.0-
Total sales - £96 4 6

Charge Sales.
00261 Csh - ***59.10.0-
00261 Csh - ***67.15.0-
Outstanding charges paid - £126 7 6

Charge A/c. Outstanding.
00261 Csh - ***36.14.6-
00261 Csh - ***67.15.0-
Balance outstanding - £104 9 6

Total Cash Received
00261 Csh - ***2.5.0-
00261 Pd - £102 4 6

Cash in drawers
00261 Csh - ***36.14.6-
00261 Csh - ***59.10.0-
00261 Csh - ***67.15.0-
00261 Pd - ***2.5.0-
Total - £102 4 6

Assistants' Identity Symbols
Reveals exact amount of business done by each assistant daily

Dept's Identity Symbols
Reveals business done daily by each dept. This is an important figure to know.

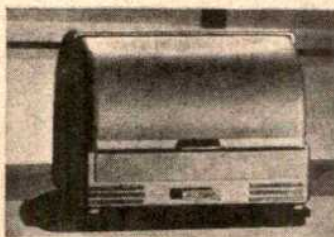


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For full particulars or free demonstration at your desk (without obligation) write to Thomas A. Edison Ltd., Victoria House, Southampton Row, London, W.C.1. Phone: Holborn 9988. There are branches and dealers in all principal cities.



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A Shortage of Office Workers is Likely Prepare NOW For It

ROBERT E. HAMPDEN, B.A.

BUSINESS in the War of to-day is very different from business in the War of 1914. In those far-off days business was caught without a war-plan. To-day the preparation is reasonably complete.

There are, however, one or two points, not included in official schedules, where management will do well to look a bit ahead.

For example, preparing for the war to last a year and probably more, the office and clerical sides of business are likely to have to face an acute shortage of female labour.

At the moment things are fairly all right. The women who have gone into the Services have not seriously disturbed the ranks of office employees. But as time goes on there is bound to be an exodus of women clerical workers into other spheres: Munitions, A.R.P., Red Cross, and the many official women's Services that are bound to be widely expanded. In addition, exigencies of the campaign may quite possibly create for women entirely new jobs that, yet, have not even been thought about.

It is certainly not too early now, therefore, to look ahead to this probable shortage and to see if anything can be done about it.

Conditions of the Last War May Be Repeated

When we plan to do something our best guide is our last procedure under similar circumstances. Let us then look back at 1916 or thereabouts. By the middle of that year I had been invalidated out of the Service and had returned to the administration side of a manufacturing concern that had a large clerical staff.

What was the position? The most efficient girls were doing men's work. They were senior accountants, heads of departments, supervisors, and so on. So far as the rank and file of office workers were concerned, we were left with a room full of raw (and many quite incompetent) recruits, some from business colleges, but most of them straight from school or home.

Do not laugh too much at this, but it shows what we were up against in those days. Among our recruits was a slim, fair little girl with a very up-stage accent. She was put on to help with the outwards mail. Given about 500 letters to seal, she took them in batches, two floors above, to the wash room, where, a senior girl afterwards told me, she sealed them by wetting a finger under a running tap and daintily dabbing the gummed flaps. In addition to minor mishaps, such as dousing some of the letters with water, this girl took

says that as the war goes on there will inevitably be an exodus of women office workers to the Services and other spheres of national work. He refers to what happened in the last war, and gives some of the difficulties that arose in offices then. Similar things, he says, will happen again - and gives some useful advice regarding them

about three hours to seal a very small proportion of the 500.

Still, she turned out pretty well in the end. But that, and worse, is the sort of raw material we have to be prepared to have if this war goes on.

In those days, therefore, we had to run a kindergarten as well as an office. It was hopeless to plump the tyro down in front of a batch of invoices and expect her to deal with them.

Similarly, disaster attended the rapid dictation of business letters full of trade or technical jargon that was so much Greek to "the new girl." Her certificate may have vouched for a high speed in shorthand and typing. But that proved of little real use. If by nothing else it was often completely offset by the most appalling spelling and the most weird ideas as to punctuation.

These things have to be taught—in the office.

Now in pretty well every office there

is some man or woman who has something of the teaching instinct. This person ought to be given the duty of staff supervisor "for duration." Where possible it is a good idea to have a senior man for this job. Women, especially young ones, work better for a man of years and experience than they do for a woman.

In the average medium-size office it simply means that this supervisor gives an hour or so each morning to explaining methods and detail to the inexperienced ones. Most girls pick up detail and routine amazingly quickly—provided they are given a good start at the outset. After a month or so of such daily counsel and assistance new-comers begin to feel at home. They become interested in their work and for that reason will take pains to carry on for themselves the improvement of spelling, lay-out of letters or whatever qualities are called for.

It is commonly believed that a high proportion of girls coming into office work in an emergency are absolutely hopeless. This is a long way from the truth. Many are, of course, pretty hopeless. By that I mean girls who never would, in any length of time, make efficient office workers. But in my experience of the last war some of the seemingly bad 'uns at the start turned out surprisingly well in course of time.

Modern Office Manager May Be a Bad Teacher

I believe that to-day the average office manager is a bad teacher. He is so used to being well provided by the various mechanized equipment suppliers with fully trained operatives that for the past twenty-five years he has not been called on to use his personal powers and to expend his patience on absolutely raw material.

That is why I suggest, therefore, that now is a good time to look around in your organization for a man (one who is not likely to be called up, even as an "old 'un" for service) who can handle the new-comers you may have to cope with.

Again looking back on my past ex-



The unobtrusiveness of the modern time recorder makes it well suited for the use of office as well as factory employees. From now on the safeguarding of working time will be one of the chief concerns of management. The recorder shown here is the new Super Electric Time Recorder made by the International Time Recording Co., Ltd.



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in conjunction with the continuous form attachment which fits any typewriter

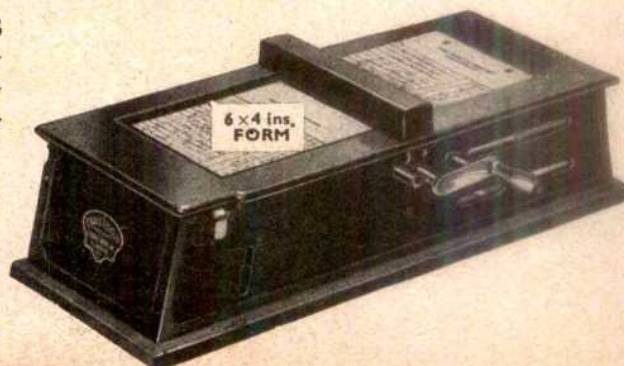
guarantees at least 30% faster production of all repetitive routine work such as billing, invoicing, day-book recording, works orders, inter-house records, etc., etc., and saves as much as 50% of the energy expended thereon. All non-productive work, of the kind which fatigues typists and eventually affects their powers of concentration, is cut out. Forms are fed smoothly to the machine; there is no interleaving of carbons, no aligning and correct registration is assured.

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perience, I recall that, apart from the actual technique of jobs, punctuality was one of the most difficult things to instil into girls who were not used to office work.

In war-time, of course, all kinds of diverting things happen. People with members of the family in the fighting forces may suddenly receive bad news; all sorts of things—movements of troops, air raid warnings, etc.—may cause traffic delays; momentous news in the papers may monopolize attention, and so on.

These things, of course, must be allowed for, but it is vitally important to observe, to the fullest extent possible, the "Business As Usual" policy.

Newcomers Have Poor Ideas of Time Value

Our method to induce punctuality in the office was to observe carefully the time kept by the girls. We did not install a time clock, though we thought about doing even that. However, whenever a girl was noticed to be late I myself made a special point of at once speaking to her about it. Though here I should mention the care necessary to ensure beforehand that the girl had not received bad news from the Front.

Periodically, too, we enclosed notices in the pay envelopes, pointing out constructively how lost time in business had a cumulative effect and was a real money waster.

To-day all-electric time clocks are so well made and so unobtrusive that I see no reason why they should not be installed in offices. The staff could easily be "sold" on the idea, especially if the installation was tied up with some scheme of bonus payment for overtime.

Many are Prodigal in These Forms of Waste

Other faults I found to be most prevalent among new-comers to office work were untidiness and waste. I do not mean that girls were naturally untidy—very few girls are naturally so—but they just did not realize the cost, for instance, of carbons. Often and often I have collected up from desks and the floor dozens of sheets of perfectly good carbons. In waste-paper baskets I have discovered typewriter ribbons still good for thousands of words.

On desks, on tops of cupboards and in all sorts of places I have found unused envelopes and letterheads, invoice forms, etc. These girls simply did not understand the principles of stationery storage and the vital need for its control.

Paper clips by the handful I have collected up; half-length pencils by the hundred I have rescued from the waste bins—where also I have seen whole sheets of new blotting-paper that have been used to mop up spilled tea.

It is out of untidiness and wastefulness of this sort that our war-time office girls, when we get them, will have to be trained. And, believe me, a lot of

tact and patience has to be exercised to do that training successfully.

Once new girls show signs of becoming competent, I believe it is of the utmost importance to give words or notes of appreciation, especially in regard to particular points. Such recognition has a tremendous effect in raising morale and in creating good will.

Another excellent incentive I found was to give rewards in the way of time off. In the last war, under the shopping and other restrictions that were in force then, this arrangement was appreciated. But under the more stringent regulations of lighting, etc., that exist to-day concessions of this sort will be more than ever valuable.

It will have to be understood that many of the girls who will no doubt come into business will be of a type very different from the ordinary wage earner. These girls, while they may make excellent employees in every way, may not react well to conditions that are rigid or dictatorial. Again, therefore, effective management must be a matter of tact.

Understudies Can Save Tremendous Trouble

With all this somewhat inexperienced material on hand I do urge the need for a system of understudies. That is to say, every girl with any capacity at all should be encouraged to learn the work of the girl just above her.



In a 32-page booklet, title as above, Richard Costain, Ltd., list a very wide range of A.R.P. appliances for the business firm. From steel shelters to candles with a plaster core base (they don't need candlesticks); from air filtration plants to small chemical closets; from mobile fire engines to electric torches, and so on. A copy can be obtained from the Company's address: Air Raid Shelter Dept., Costain House, Upper Woburn Place, London, W.C.1.

It is not difficult to arrange this if, again, plenty of patience is exercised. In war-time, absenteeism is necessarily more frequent than in normal times; the understudy will probably therefore have plenty of opportunity of practice-running her senior's job.

To get girls to take an interest in the post above them is one of the best means of interesting them in the business. And if it is known that the girls in your office are not regarded as machines but as seniors or executives in the making, keenness will spread throughout the organization. It is surprising what difficult and responsible work quite young girls will undertake if they are intelligently schooled into their duties.

The Factory Manager Sets Good Examples

In the matter of everyday efficiency even the best office manager can learn a lot from the factory manager. Just before writing this article I was watching a squad of girls in the mail-room of a well-known firm. They were filling envelopes with a sample, a folder and a covering letter. Not one of these girls had the right notions for dexterous work. Now if a single girl had known how to do the work efficiently, and had shown the others the correct motions, their output might have been doubled.

In every department of office work the same thing holds true. Every girl employed, from switchboard operator to personal secretary, from messenger to cashier, requires constant coaching and encouragement if she is to attain efficiency.

It must be understood that young women are not nearly so "inventive" as men. They generally have to be taught what men will think out for themselves. Women tend to be imitative; therefore they will stick to procedure as it has been done before, rather than devise a new and better way on their own initiative.

One little subterfuge which I have known to be very effective in helping girls to speed up a monotonous job is this: Faced with a big batch of letters to be "filled-in," a girl is liable to tackle the job with a certain amount of distaste. But if it is suggested to her that she start by doing a dozen, as if there were only a dozen, timing herself at the work, she will quickly begin to race against her own record in doing successive dozens.

Believe it or not, the successful handling of inexperienced staff under conditions that are likely to come about is more a matter of fully understanding silly little devices like that than in being expert in the most scientific systems in the world.

Mechanization Must Be Carefully Taught

To-day, of course, offices are far more completely equipped with mechanized equipment than they were in the war of 1914. Raw recruits for office work

(Continued on page 30)

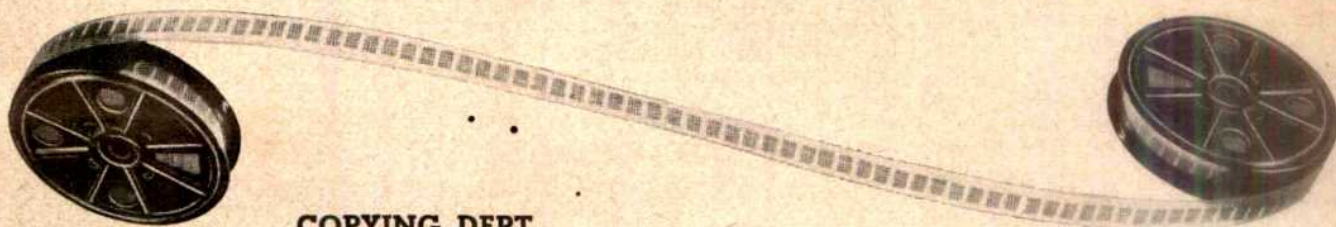
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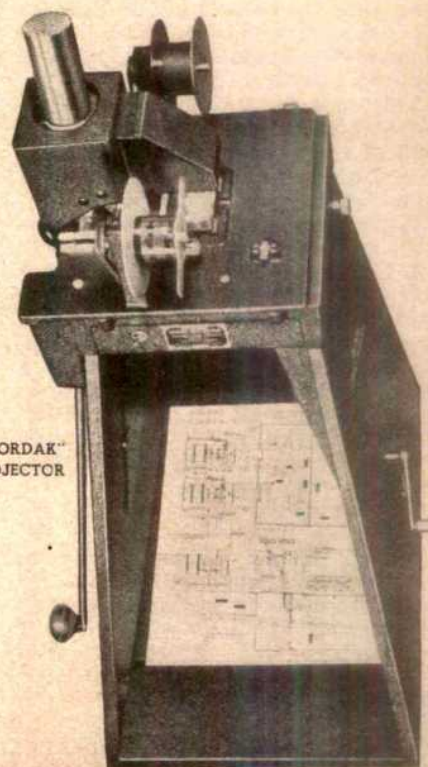
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10 Ways In Which *EVERY* Office Can Reduce Paper Consumption . . .

NEED FOR ECONOMY IN PAPER

EVERYONE CAN HELP

An important national economy in which everyone should co-operate is the saving of paper. Paper is bound to become scarce, and a rationing scheme will be applied shortly.

Last year the United Kingdom imported nearly 2,000,000 tons of raw materials for paper-making and more than 1,000,000 tons of manufactured paper and cardboard.

Now is the time to help to conserve the nation's paper resources by being economical in all forms of writing, printing and wrapping paper. We imported last year 650,000 tons of ordinary wrapping paper and 76,000 tons of stationery.

There is scope for ingenuity as well as economy. With a little imagination it is possible to think of many ways of reducing one's consumption of paper.

Since the above notification the scheme, of course, has advanced, and the prevention of unnecessary consumption of paper and the preservation of waste paper is to-day a major national duty

DON'T keep up your pre-war fastidiousness and have letters re-typed because of small errors, etc., made by the typist. The recipient will not mind a few ink corrections made by your own hand.

Let your typists know about this concession you are willing to make—not with the idea, of course, of encouraging their carelessness but to let them understand that, in *every* phase of office work to-day economy of paper is a national necessity.

Every once in a while have some responsible executive look over the contents of waste paper baskets at the end of a day's work, particularly in large clerical and typing departments.

In far the majority of firms the unnoticed waste of paper here is criminal.

A typist puts in her machine a perfectly good letterhead but accidentally starts the letter with 1938 instead of 1939, or some such lapse; she rips out the sheet, screws it up and tosses it away. It happens thousands of times a day in firms all over the country. The same with envelopes: a badly centred address and the thing is torn up and a new envelope used.

This sort of thing *must* stop.

DON'T make carbon copies of utterly unimportant letters. A proportion of every firm's mail consists of letters of which no record is ever likely to be needed. Executives, when dictating, should give the instruction: "No copy."

DON'T have lists, etc., typed on separate sheets when they can quite

well be embodied in one single page letter.

DON'T dictate letters that require a second sheet merely to carry the last line and your signature. This happens in more cases than is generally known. You cannot, of course, always judge the length of a letter when dictating; but keep this point in mind.

DON'T permit the prodigal use of printed memo. forms for inter-office use, especially if these are in pack form giving multi-copies of each message. Verbal messages and instructions are not always sufficiently positive, nevertheless there are plenty of occasions when the internal phone will be just as effective as a message on paper.

DON'T rush into print with new ideas for folders, price lists, etc. We are not in any way suggesting that good sales promotion literature should be unduly curbed, but just give a bit of extra thought to *all* the factors involved before giving the order to go ahead. Quite often, for example, a price list or other piece of matter can be equally well run off on an office duplicating machine, using much cheaper paper and smaller runs than would be involved in an ordinary printing job.

Many letters can be replied to like this. If every firm would adopt the plan to those letters for which it is convenient and appropriate, then the daily paper-saving throughout the country would amount to an enormous total

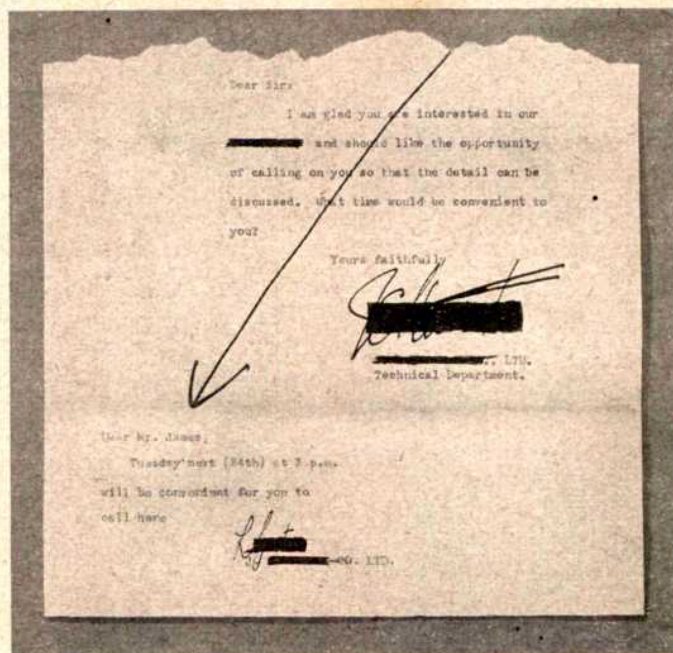
DON'T even use the office duplicating machine without finding out beforehand (not merely guessing) the exact number of copies required. Issue paper accordingly, if there is no automatic counter on the machine.

DON'T use printed letterheads for scribbling paper. Don't use whole sheets of *any* paper for jotting down merely a few words or figures.

DON'T store stationery where the tops and edges of sheets can get dirty and damaged. Letterheads and envelopes kept in the drawers of desks and on open shelves are liable to this.

DON'T throw away good wrapping paper that encloses incoming goods. The dispatch departments of some small firms keep themselves going entirely on "second-hand" wrapping paper. And why not? Some wrapping paper will stand four or five journeys let alone two. You can conserve much paper here. Your parcel does not have to look as though it was built up in an artist's studio.

DON'T throw away used fibre containers: open them carefully and use again. They're made of paper materials.



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FIRST and foremost advantage of baling your own waste paper is, of course, that the waste paper merchants give you a better price for it. But there are other big advantages as well.

Baled paper needs no sacks: sacks are getting scarce and expensive. Baled paper takes up much less space and practically eliminates risk of fire.

A bale of waste paper is rock-hard and

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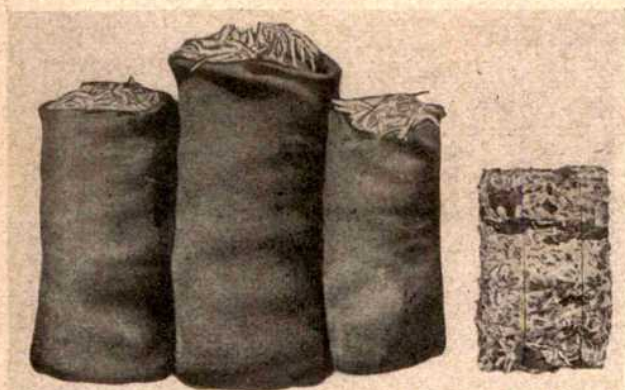
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is so tough that many firms are using them instead of sand-bag defences. Compressed paper is even more resistant to bullets or bomb splinters than is bagged earth; it is also nearly as fire-proof. An incendiary bomb cannot fire a well-packed paper

of special interest to firms to-day.

This press, known as the "Compactum," is hand operated—a boy can use it—and occupies only 25 by 26 inches of floor space. It compresses and wires bales as shown in the illustration. Bales measure



This machine packs three full-size sacks of waste paper into one small bale weighing about 75 lb.

bale: it can only fire the few loose edges of paper, and they soon go out or can be instantly put out.

A new paper-baling press that sells for as little as £6 10s., complete with a supply of hooked wires for binding, is therefore

14 by 18 by 30 inches and weigh about 75 lb. Readers who would like further details of this useful baler should write to Hunter-Penrose, Ltd., 109 Farringdon Road, London, E.C.1.

Solves

Trickiest Points of Your Black-out Problem

THE black-out makes heavy demands on every firm, but, whatever resort managers are driven to in order to keep the main windows of their offices and factories effectively blacked-out, there still remains an important and difficult problem.

We refer to the problem of illuminating corridors and passages where lights are near to frequently opened doors, and of lighting such places as lavatories, where it is highly desirable that windows should be kept open to fresh air.

In corridors, passages, exits, and entrances two factors are essential: (1) there *must* be light; (2) yet the passage of individuals to and fro *must* be kept as free as possible: i.e., unencumbered by heavy drapes, solid partitions or other form of movement-hindering light-trap.

Similarly, with lavatories, there must be light, yet the circulation of fresh air through open windows is also essential.

Management's problem, therefore, is: how to provide these two apparently conflicting conditions: how to maintain adequate illumination in the face of frequently opened doors and unscreened open windows.

The Translu-Blue light shield has been designed to solve this difficulty.

As the illustration shows, this shield is provided with two apertures. The one in the side of the metal shield is permanently blue-screened with a special colour-impregnated material. The aperture in the base can be used

This illustration shows the two-directional light shields, the side apertures emitting screened general light, while the base apertures emit screened or full strength light, according to circumstances. In this case the shields nearest the window are being used fully screened, while the two nearest the camera are emitting white light through the base apertures. The window at the far end is NOT blacked out. It is, in fact, often left open to fresh air

blue-screened or open, as desired.

In use, the shield is fitted so that the side aperture faces inwards and *away* from doors and windows. Thus the interior of passage or lavatory is suffused with a soft general illumination of quite sufficient intensity for clear vision yet of such low *reflecting* power that the illumination is invisible from outside, even through an open window.

The base aperture, used unscreened, provides a directional beam of full-strength white light. In many cases this full-strength unscreened light of limited area can be freely used, but where it strikes large light-coloured surfaces, such as white paintwork, a light-coloured floor or light-coloured clothing (such as overalls) of people constantly passing beneath it, then the blue filter disc should be inserted. In this way the direct light is softened down and the *reflected* light from light-coloured surfaces cut out.

With the shield in this condition it becomes a complete "safe light" that permits uninterrupted, accident-free movement of people to and fro along corridors or through outside doors that can even be propped open.

In the same way lavatories or other places can be illuminated while windows are kept unscreened and open to the fresh air.

These light shields have undergone tests as outlined above and have been approved by Air Wardens and Special Constables.

Readers who would like further details of these Translu-Blue light shields should write direct to A.R.P. Supplies, 76 Strand, London, W.C.2.



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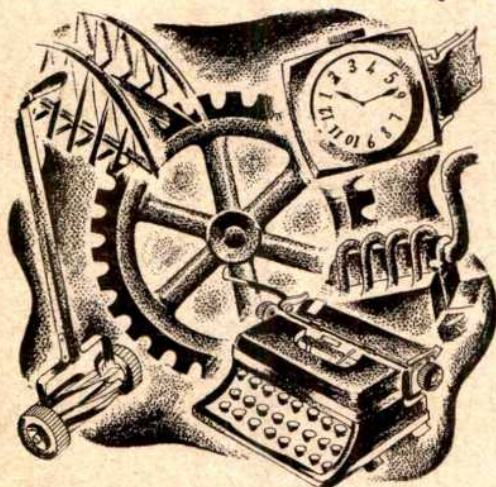


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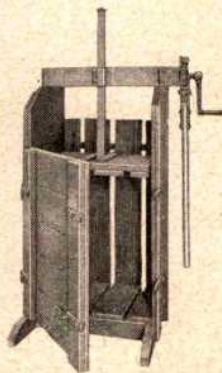
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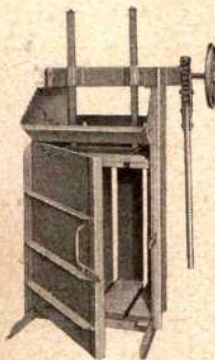
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Provincial Firm's Chances to Open London Offices Now

EXODUS of many firms from London into the country has left numbers of empty offices at economical rents that should appeal to those provincial firms wishing to establish premises in London but who have formerly had difficulty in finding a suitable location.

For example, in Holborn Viaduct House, important City site *en route* to the West End, there are office suites from 1,175 sq. ft. at £550 per annum to simple offices of 223 sq. ft. at £26. Furnishing is supplied at only 10 per cent extra on those rents.

Further details can be obtained from the Estate Office, Holborn Viaduct House, E.C.1. This is a typical example of what can now be obtained in London. If provincial readers want further information the Editor will pass their inquiries to the appropriate quarters.

A Help Towards More Accurate Typing

TWO hundred and forty-seven pages of safeguards against the spelling, punctuation and other traps into which typists are likely to fall: six thousand helpful points for all those, in fact, who type or write letters, reports, articles, and so on. That is the contents of a compact (3½ in. by 6 in.) little book, *The Typist's Treasury*, just published (second edition) at two shillings by Jordan & Sons, Ltd., 116 Chancery Lane, W.C.2.

Possible Shortage of Office Staff

(Continued from page 24)

will therefore have to learn many mechanized jobs. Let me therefore urge that whoever is selected to look after future staff takes the opportunity now to learn as much about the mechanized equipment as possible.

There is an urgent reason for this suggestion. In normal times the equipment suppliers can always get sufficient girls for training in their special operators' schools. From these schools they can always supply properly trained personnel. Later on, however, these suppliers may not be able to provide you with skilled people. It will therefore be up to the business man's own staff to do the training. That is a point that needs bearing in mind.

It will be very little use advertising

for calculating machine operators, and so forth, because it is pretty certain there will not be any available.

No man can say how long this war will last. We may not reach the conditions I have referred to in this article. If, however, we do set out now to prepare for them, many of the little troubles that were thrust upon the internal workings of business in the last war will be avoided—or at least much alleviated.

Most Retailers Run a Dept. Store

(Continued from page 20)

4. Locate and stop losses which cause stock shrinkage.
5. Change position of departments in a shop.
6. Reduce stocks of slow-moving lines and invest in lines that sell faster.
7. Reduce selling costs in a department.
8. Reduce mark-down losses through more intelligent buying.
9. Increase stock-turn.

Careful investigations into retail merchandising in establishments where modern cash registers have been installed revealed some remarkable facts. The losses and profits of various departments in most cases may readily be imagined to have turned out other than expected. The most interesting disclosures, however, were in shops where the retailer worked himself and employed up to three or four sales assistants. The register proved in many cases that the profit earned by the retailer on his personal sales was greater than the ultimate profit of the whole shop. In other words, these retailers worked to support their assistants. The register produced records making this state of affairs apparent, and thus led the way to the necessary changes for better business management.

In my opinion, a business without department records is like a clock without hands: you can tell by the pendulum that it is running, but you have to guess at the time.

Bigger Export Markets NOW

(Continued from page 18)

are definitely *helpful* to the export trade as a whole and to the exporter, especially the small man, individually.

Moreover, there are plans in hand for the much greater future expansion of facilities for export trading.

But building up an export business is a much longer range job than dealing with markets at home, and in view of Britain's paramount need of markets overseas as permanently expanding.

outlets for goods, it is truly amazing that, until effort on the part of this Institute was recently successful, no schools for training young men for the export business existed anywhere in this country.

Firms Like This Want Experienced MEN

The following letter from the firm, Johnson, Matthey & Co., Ltd., clearly indicates the difficulty. It is reproduced by kind permission of the Secretary of that company.

"When requiring a chemist for our analytical or research laboratories it is comparatively easy to engage a man who has already had his basic training before entering a business establishment. Such a man does not require an elementary training in chemistry or physics, because he already has foundation knowledge upon which to build up the peculiar requirements of our business.

"It appears to us, however, to be extremely difficult to find a parallel with regard to men for overseas positions.

"This particular business has developed rapidly during the past few years, and all the suitable available existing members of the staff have already been absorbed for posts abroad. Unless we legislate for a number of years ahead by beginning now to train men to occupy positions abroad in, say, 7-10 years' time, we may find our expansion limited by our lack of suitable representatives than by our ability to produce merchandise for which there is a demand."

There is triple reason, therefore, for firms, now, to plan for bigger export business. The reasons are (a) that we need at once more wealth to meet our present war-time needs, (b) we want a bulwark of export trade that will be able to provide life blood for our industries in the reaction that will follow when the war ends, and (c) quite apart from the mere scouring of overseas markets, it takes a long time to train the vitally necessary personnel to hold and develop those markets once they have been secured.

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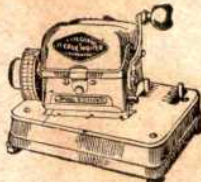


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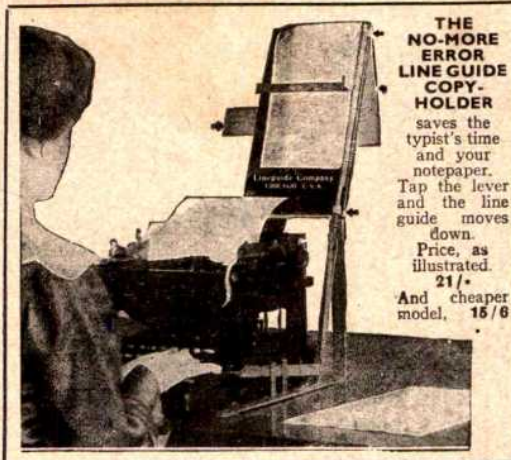
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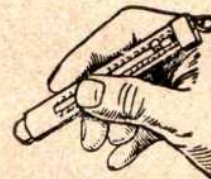


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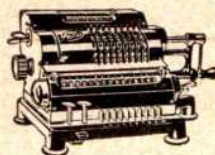
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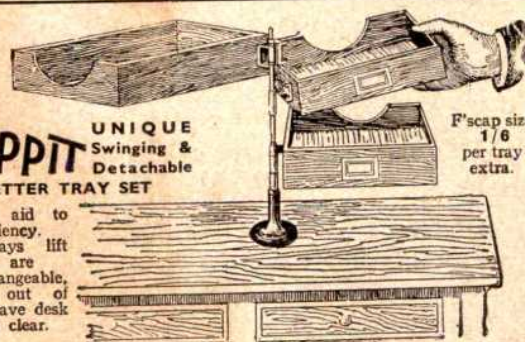
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The Importance of Speed in time of War



*How the Dictaphone
ensures the quick
dispatch of business*

by
Thomas Dixon

Modern Business, even in times of peace, more and more urgently demands speed; in time of war it becomes doubly and trebly important to do every necessary job in the quickest way possible. There is more work to be done and, what makes matters still more difficult, staffs are almost universally depleted by the call to war service.

There is only one remedy if efficiency is to be maintained. We must all do more work and we must not only work harder and faster ourselves, but we must adopt every device by which human labour can be economised, diverted from useless, non-productive tasks and freed for such duties as demand intelligence. We literally cannot afford to do things except in the most expeditious and efficient manner possible.

That is one of the paramount reasons why in the present critical time the speed and accuracy of the dictating machine specially commend themselves to the busy executive who realises the importance of carrying on in war time with the maximum of efficiency.

Dictaphone recording is absolutely automatic. The Dictaphone will record just as fast as you can speak. It will infallibly catch every word, every inflection of your voice. And the reproduction of your dictation can be clearly heard and easily transcribed by even the slowest typist, because she can control the speed of reproduction to suit exactly her typing ability.

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In accuracy there can be no comparison between the automatic recording and reproduction of the Dictaphone and the shorthand-writer's version of what you have said. Shorthand, by its very nature, is full of possibilities of error. Outlines may be, and often are, misread; the shorthand-writer may mishear a word and replace it with a wrong one. Moreover, should the shorthand-writer be taken suddenly ill before she has transcribed her notes, the work must be held up because no one else can read her notes.

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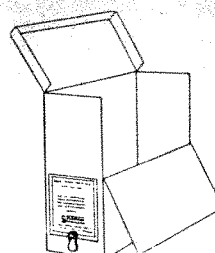
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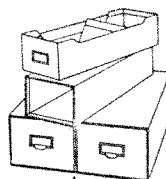
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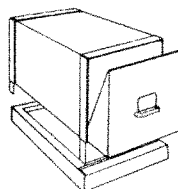
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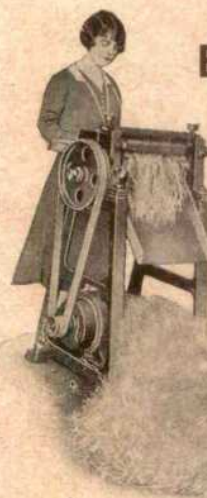
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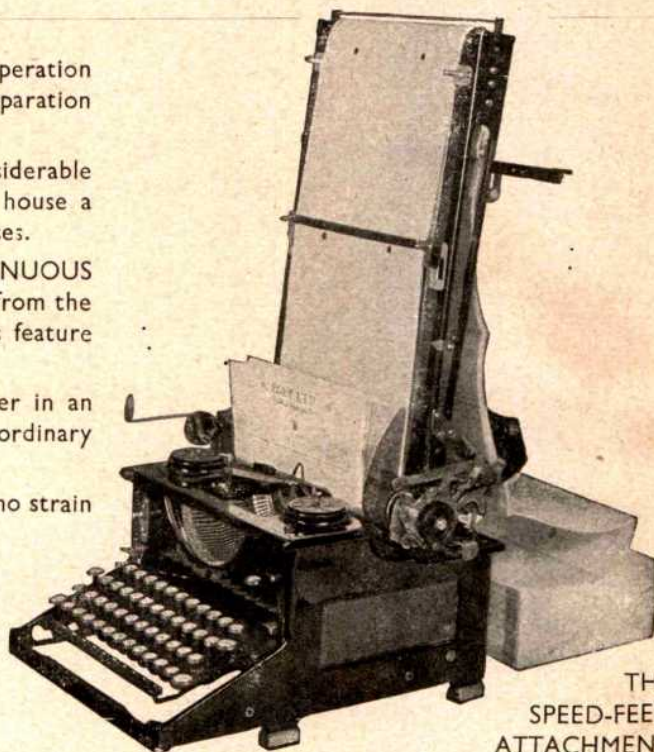
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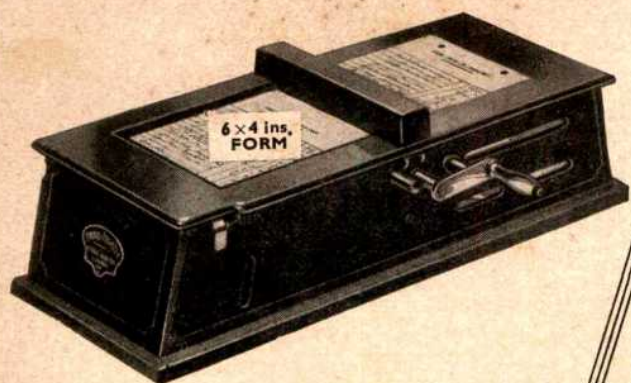
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To-day's Danger is . . . *Too Much Amateur CONTROL*

AFTER ten weeks of what is referred to in the highest political circles as "this strangest of wars," commerce and industry, still free from devastation by enemy action, can take stock of what it has gained or suffered by action on the home front.

In an emergency, the many minor problems seem to overwhelm major issues. The business concern is engrossed in keeping pace with Orders in Council, complying with A.R.P. instructions in the matter of providing shelters for employees, restricting power and lighting plants, safeguarding inflammable materials and blacking out with a succession of devices. There are also problems of distributing to best advantage the limited allowances of petrol, finding substitutes for men called up, keeping pace with the ever-varying complexities of international affairs, obtaining American papers in an endeavour to follow the true state of affairs, keeping in touch with the fluctuating rates of exchange and trading-with-the-enemy regulations, obtaining import and export licences, and so forth.

The business man, rising above these daily concerns, looks at his business and his industry as a whole. That organization of business under war conditions is not perfect would probably be agreed generally and without hesitation. There are many who could fill a whole issue of *BUSINESS* with examples of official failure to use men and resources to the best advantage. Before tackling the problem of how to

"FREEDOM IS IN DANGER, DEFEND IT WITH ALL YOUR MIGHT" . . . that rousing call applies particularly to industry on the Home Front.

The business executive urges that the utmost possible amount of freedom be permitted in the management of his individual business. Only so can he pull his full weight in the nation's interests.

As things stand to-day industry complains of an excess of bureaucratic control. This inevitably means *un-informed* control. Bureaucracy means so well, but it doesn't *know*.

What is business's defence against this condition? It is immediate co-operation and *action*, through the full strength of Trade Associations, directed to securing that greater freedom for natural movement and development that alone will enable industry to help win the war . . . and the peace.

set about remedying this state of affairs and what the responsibility of the individual business man and individual business is. I might quote three examples, illustrative of official (1) inefficiency, (2) inconsistency, (3) inadequacy.

(1) **INEFFICIENCY:** A planned economy is obviously essential in war time in industries where vital raw materials are limited. To Controls

being set up, no business man would therefore object. The weakness to the business man would be if, directly or indirectly, such Controls were put into the hands of people who not only in the past have not been interested in a controlled economy but who probably even now do not realise its significance.

The Control which affects my own industry is the Paper Control. At no time have the objects of such Control

been made public, but one would imagine that its purpose is to see that an adequate supply of paper is available at a price which will control consumption to such an extent that as much paper as is necessary will be available over the estimated period of the war.

Unfortunately, not only has the Paper Control, as far as can be made out, failed to effect this purpose, but its activities seem to have had exactly the opposite result.

Having at the start fixed prices at a lower level than anyone could justify, the result has been that, as one could not buy material at say £18 a ton although one was prepared to pay £26, one purchased for £34 a ton from Scandinavia—with the result that any material obtained at the lower British price could be sold on the basis of the higher Scandinavian price! In point of fact prices were unnecessarily raised, consumption nevertheless increased and the low Control prices restricted production.

In times of peace when the law of supply and demand is allowed to regulate prices, consumption and production there has been a tendency, even in the worst times, to level up within about 10—15 per cent. Control has entirely upset this equilibrium. It can only be hoped that adjustment will be made, and made immediately.

Best Use NOT Being Made Of Waste

To carry the issue a step further: to waste paper. About this there has already been sufficient criticism from many other quarters to reveal that the best uses are not being made of our resources. The war has again completely altered the producers' outlook on scrap.

When materials can be bought freely from any quarter at low prices the destination of scrap may be of little consequence. Under present conditions, however, it is of the utmost importance. In my industry for instance, about 25 per cent. of the material used for manufacture finishes up as scrap. As raw material is now scarce this scrap value is even more than its commercial price because it is *the raw material for more manufacture*. Hence we could offer suppliers, as a temptation to supply us with material, not only the price but a supply of a scarce raw material.

Under our present administration, however, this commonsense arrange-

ment cannot be operated. We are only permitted to send our scrap to the source to which it was directed before conditions prevailed, where it is converted into nothing we use. No mill from which we purchase our raw material is permitted to take our scrap to help them to provide us with more raw material. Thus each week the likelihood of our producing scrap is diminished while the necessity for scrap is pleaded in urgent national appeals.

(2) **INCONSISTENCY:** It is said that there is no virtue without temptation and the ability of business firms to repudiate their undertakings is probably better tested on the outbreak of war than on any other occasion.

Again referring to my industry, a year ago, when there was a violent collapse in prices of raw materials, suppliers with large stocks of these materials purchased at the higher prices appealed pathetically to buyers to be prepared to pay the higher prices, the lag in the fall in prices of manufactured board and paper being excused on the ground that large stocks of these expensive raw materials were held. Yet no sooner did this war break out than we were faced on all sides by declarations that mills had no stocks whatever of raw materials and it was utterly impossible for them to meet the deliveries already promised. If contracts were not repudiated immediately it was apparently thought quite in order to declare void, seven weeks after the outbreak of war, contracts placed at the beginning of August for material which had already been sold for future delivery on the basis of these contracts!

Another inconsistency with regard to contracts is this. While customers acquiesce in a 10, 20, 30, 40 per cent. increase owing to the "rise in material costs," if it is explained that owing to a condition of sale which has been operative for three years they are due to pay an extra 15 per cent. in respect of depreciation of currency, such a claim is indignantly rejected.

Then there is the question of transport. The rationing of petrol and the withdrawal of men has led in some cases to a 50 per cent. increase on road rates. Granted there is a *certain* increase, it is *not* the case that the difficulty and the obstacle of transport is sufficient reason to excuse delivery or receipt of goods within a normal period.

Instancing my own company, with the outbreak of war one of our conditions of sale, that all completed goods in stock would be delivered immediately, came into being. It took less than six weeks to despatch, over and above our normal output of about 100 tons a week, the 500 tons of completed goods in stock.

Away With This Apathy: Get Some Action!

(3) **INADEQUACY:** It is unbelievable that the whole army of Chamber of Commerce, Federations of Employers, Trade Associations and Trade Unions should fall in behind improvised organizations, in the formation of which they have had no voice whatever, and accept new conditions against which their members protest, yet find no method of making effective these protests.

The war has brought about in practically no sphere of activity as in commercial and industrial circles, such a violent revolution, so little in accordance with the ideas and aims of the average business man, which has met with so little resistance.

Failure to act may not be common among all such bodies, but, again speaking personally, unbelievable as it may sound, my company received a few days ago from one of the several trade organizations to which we belong, a notice to the effect that it was thought advisable *not* to hold the next monthly meeting as, after consultation (among officials), it had been decided *there was so little to discuss it was unnecessary to hold a meeting!*

That, when the state of war had brought with it nothing short of revolution in every aspect of the business, whether connected with buying or selling, regulation of supplies or labour conditions.

Have other organizations left individual members of the trade to make individual agreements which could very much better have been made by the body representing the trade as a whole?

Trade Organizations' Red Tape Almost As Bad

When I saw the stringent regulations governing the obscuring of light I had a rough calculation made and found that about 20 tons of asbestos sheeting would be required for darkening the glass roof of one part of our factory. These 20 tons, if daylight for colour matching was to be retained, would have to be removed each morning and replaced each night. The problem was investigated, employees consulted, and they, somewhat to our amazement, got their local trade unions to agree to our proposal for production only in daylight which, although it involved reverting to a six day week and, in the few darkest weeks of the year, working on Saturday afternoons, on an average only very slightly decreased the normal hours of work.

Continued on Page 32

Our Biggest Industrial Assets Devalued

The business of which C. H. Foyle is the head is acknowledged to be one of the best run concerns in the country. Practising, with exemplary skill, the principles of scientific management, it is the type of business structure that, permitted to function with the high efficiency it normally displays, would contribute enormously to the nation's industrial war effort. Yet here it is, in common with most other business organisations of high potential, slowed down, hindered, much reduced in value by the persistent anomalies imposed by an un-informed bureaucracy.

Raw Material Supplies for Industry

NEVER can it be possible for a nation's industry to be changed quickly from a peace to a war basis without there being caused to individuals and organizations concerned a great many difficulties and apparent anomalies.

So infinitely wide and delicately adjusted is the variety of factors involved and so little is known about some of the eventualities against which it is the object to prepare that it is quite beyond the wit of man to devise an instantaneous and completely harmonious transformation from the one state to the other.

The business man of course realises this. But, reacting strongly to the many

Raw Materials CONTROLLERS

addresses are listed on

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difficulties that have sprung up in his path, he asserts that those responsible for converting the country's industrial efforts from peace to war have not made such a good job of it as they should—and could—have done. Moreover, he asserts, those authorities are not rectifying quickly enough the maladjustments that are already painfully and dangerously obvious.

It was with these considerations in mind, and with ample evidence of business's dissatisfaction at the present state of things, that we approached the Board of Trade for a statement about some of the chief difficulties that firms throughout the country are experiencing.

Clear evidence exists to show that the main difficulty in industry, so far as it is not engaged upon government contracts, is inability to get sufficient raw materials. To the extent that firms manufacturing normally look for Export and for the home markets give preference to the satisfaction of home requirements it is the export trade, unfortunately, that must suffer. It is, however, undesirable that our export trade should be permitted to suffer at the expense of the satisfaction of unessential home demands.

There is no need here to stress the urgency of Britain's need to consolidate export business. Not only as a war weapon do exports figure in the front rank, because they alone can earn the foreign currency required to purchase foodstuffs and raw materials which it is essential to import, but also their maintenance is a vital necessity as a basis for the nation's commercial security in the period that will follow the war.

It is because of its realisation of the

Indication of the Official Attitude

from a special Interview with the

INDUSTRIAL SUPPLIES Dept. of the BOARD OF TRADE

importance of the maintenance of the country's export trade that the Government, through the Board of Trade, made an announcement in the press (October 18th), that discussions would take place with a view to ascertaining from the various industries what supplies of raw materials were required for their export trade, it being the intention of the Government to facilitate, as far as possible, the operation of those industries for export purposes.

QUESTION 1.

From a Board of Trade official, therefore, we sought explanation of the passage contained in that statement, to the effect that:

"Of materials not subject to control manufacturers should experience no special difficulty in obtaining supplies, and even in the case of controlled materials there should in most cases be no difficulty in obtaining supplies for manufacture for export."

It is with controlled materials, of course, that most difficulties are experienced: This is inevitable because controls are imposed for the very reason that the materials covered by them are of prime importance to the war effort and because unless they are controlled there would be a dissipation of stock to meet unessential requirements.

We have not room here to list all the materials that are subject to control.

Individual manufacturers will know well enough whether or not their own materials are affected.

The advice of the Board of Trade is: approach your appropriate controller and put your case clearly before him. Every effort, it is stated, will be made to make materials available for the completion of export business that is demonstrably beneficial to this country, although temporary shortages of some materials may occur.

But this advice is also given: Find out definitely where your controller is located. In some cases (such as timber) the various areas of Britain have each their own area offices. Manufacturers using timber should apply to the office in their individual area.

This may appear to be elementary advice, but the Board of Trade state that some manufacturers are wasting valuable time and causing unnecessary work to the authorities by making applications to the wrong official quarter.

Addresses of the Controllers of principal raw materials are listed at the end of this article.

It should be borne in mind that the Ministry of Supply's Controls deal mainly with materials in the raw or unfinished state. Where it is materials in the more advanced stages of manufacture that are required, recourse should be had to the normal suppliers of such materials, and it should be left to such suppliers to take up any question in regard to raw materials with the appropriate control.

QUESTION 2.

Confusion exists in the minds of many manufacturers, who are partly on government contract work, as to what order of



priority they should lay down for their work. We asked this question:

"Would it be correct to say that the manufacturer's energies should be in the order:—

- (1) completion of Government orders
- (2) completion of Export orders
- (3) completion of Private home orders."

To this the official replied that no injunctions are laid upon manufacturers. The Ministry of Supply have issued to Manufacturers a memorandum on the principles governing the system of priority in regard to supplies for national purposes. This memorandum states that, other things being equal, orders should be carried out in the order in which they are received.

Obviously, the time schedules called for by government contracts should be met, but even while observing such conditions the manufacturers will best help towards the general objective by exercising his own experienced discretion.

For example, he would obviously decide to give a due measure of preference to filling a private export (or even home) order that would suffer or be lost by delay when he was sure (after making any necessary enquiry of the Government dept. concerned) no such danger threatened some small delay to his government work that might be destined, say, for stock or for some not vitally urgent purpose.

QUESTION 3.

Answering the question:

"To what export markets do you recommend manufacturers to direct their attention," the official said:

Practically all export trade is desirable for one reason or another, and it would be unwise to be dogmatic. Much may depend on circumstances affecting particular trades. There is the short-term problem of obtaining exchange, particularly dollar exchange, for the immediate purposes of the war; and it is therefore desired particularly to encourage export trade to the so-called "hard-currency" countries, that is, those countries outside the sterling group whose currency now stands at a premium in relation to sterling.

The countries that come first to the mind are the U.S.A. and Canada. After these come Argentine, Sweden, Norway, Belgium, Switzerland and the Netherlands: exports to the colonial territories of these countries are of equal importance with exports to the countries named.

There is also the long-term problem of preserving our export markets during the war, with a view to our position in the post-war period.

It is very desirable that we should sell as much as possible to the Dominions, particularly the Union of South Africa, and to other countries in the sterling group, both because we have to import substantially from those countries and for the "long-term" reason already mentioned. There are, special reasons, too, for encouraging an export trade with France and Denmark and also with other European countries.

Finally, and this is important, the Industrial Supplies Department of the Board of Trade wishes it to be known that it will do its best to assist manufacturers in their war time difficulties as regards supplies, but suggests that they should first make certain that they have exhausted other possibilities of solving their problems.

For example, where controlled raw materials are involved, approach should first be made to the appropriate control.

Where supplies of materials in a semi-finished or finished form are required, normal and other likely sources of supply should first be tapped.

Unnecessary enquiries throw an excessive burden on a hard-pressed Department and make it so much the more difficult for prompt and effective assistance to be rendered in cases of genuine necessity.

Telephone enquiries should be avoided

as far as possible. Problems and requirements should be sent by letter to the Department at Great George Street, London, S.W.1.

Questions relating to orders which are being executed directly or indirectly for Service or other Government Departments, A.R.P. Services, etc., should be referred to the Government Department or

Continued on page 31.

Losses turned to Profits when we Cut 3,000 Lines to 2

by EDGAR DODD

Director, Metal Utilities (Wolverhampton) Ltd.

I SPENT 20 years of my life running a pretty big business of its type. At the end of 20 years' hard work the business had to be sold. We had rarely made a net profit in the whole of that time. Yet we had worked like niggers!

Size Isn't Everything

Today I am running a business only a fraction of that size. Yet in the six years of our existence we have been able to show a comparatively large profit from the first year. How does it happen?

Largely because I have tried to profit by the mistakes we made in the big concern. We were manufacturers in the hardware business. It took a large warehouse to hold even our stock, quite apart from the space taken up by the plant.

The first thing I did when I went into the old concern was to compile a new catalogue. I found that we were handling 3,000 lines. The firm seemed to do everything from toilet-ware to trunks. The range included aluminium cooking utensils, tin-ware, sanitary utensils, hospital furniture, stationery lines, kitchen-ware, wheelbarrows, electric light fittings, and so on. The star salesman had only to shout loud enough for a new line and he got it.

Costs Cut All Round

There was one excuse for this constant expansion of lines: the tin and japan trades were already dying before the war. The mistake was to attempt full ranges both in the old trade or in the newer aluminium and steel lines.

In the little business I now run, which is an associate of James Gibbons Ltd., we do 80 per cent. of our business on one line, and one line only. Instead of employing several hundred people, we employ only 25. Similarly our capital is only a fraction compared with that of £50,000 in the old concern. We have no competition from aluminium, plastics, or the new cellulose finishes.

Our main line is a metal uniform case for tropical climates. It is highly standardised, so that we can produce

it on mass production lines. By these methods we are able to make a better case than we ever did before. We use electric presses instead of hand work. By efficient standardisation we have now cut the price of these cases by 50 per cent.

Instead of short runs we have long runs; instead of buying quantities of materials and parts of all classes, strengths and sizes, we buy only one standard type of each. At the same time our sales problem is immensely simplified since we sell only to a few large specialist firms; we do not have to get our business, far less to buy it. This also simplifies the whole financial end.

We employ only 25 men, but they are all highly skilled. Indeed labour is my big problem today. For when the Army takes a skilled moulder, for instance, he simply cannot be replaced today in Wolverhampton. I cannot train a substitute. Indeed it might take ten years to train his successor, for expertness in moulding is achieved only by the growth of the necessary muscles and skill to use them deftly.

The only other line we produce is a technical speciality which we make for one firm only. There is variation in sizes and detail in this work, but the quality of steel and of fittings used is highly standardised. Here too we are able to cut down the expense of individual work.

The moral for business executives? I think it is simply this. If you happen to have a limited capital, you would be far more successful in running a small specialised business on very modern lines than in trying to handle a large general business on old-fashioned individual lines. And you would have more fun. Indeed the management of this small unit is a positive pleasure to me. For within its narrow limits one is able to reach a high level of efficiency, in finish and in distribution.

Of course the number of lines in which you are not open to competition from the great combines is small. I seized one of them. But I do think that today there are more openings for a very good single speciality line than many executives imagine. Size certainly isn't everything.

Raw Materials Stopped . . . so we found Substitutes & Created New Lines

By JOHN BEHARRELL

Managing Director, Hawker and Botwood Ltd.

I FEEL I must be voicing the experience of many executives when I say that the onset of this war forced us to sit down to a bout of the most serious business thinking we've indulged in for a long time.

About the direction and the outcome of this thinking an individual, of course, cannot generalize. He can recount only his own reactions in relation to his own business.

So far as concerns this company, we are seeing now that our enforced period of thinking was very much to our advantage. The mere fact of having to sit down, with all routine ideas and prejudices in our minds completely overturned, prompted us to look into our policy with more searching thoroughness than ever before.

Declaration of war brought us face to face with the most serious position of all, a complete stoppage of supplies of raw materials for our main products: special types of feeding stuffs, and fertilisers.

It was in the face of this apparently lethal blow that we had to sit down to our business thinking.

Three Ways Were Open

Forced into such a situation we could do one of three things. We could throw up our hands, close down the plant and discharge a hundred or so employees. We could cut down to a skeleton organization, sue for government aid and try to get back on a "subsidised" basis—a process that, even if successful, would inevitably take a long time. Or, finally, we could use our vigour and our resources in an attempt to overcome all obstacles.

We chose this last course, and are succeeding, even beyond our expectations.

We have not discharged a single employee, and to-day we are in new lines of activity which have every prospect of becoming greater in volume and scope than our pre-war business.

Not only does this attractive prospect

**Constructive thinking that
overcomes war-time
difficulties**

This article provides a good
example of it.

seem open to ourselves, but, owing to the nature of it, its development is likely to prove a new asset to industry and to the public as a whole.

Here is the line of approach which we followed:

The bulk of our plant consisted of apparatus for drying fish and preparing it for feeding stuffs and fertilisers. We argued that if it would handle fish why should it not handle vegetable matter? We tried an experiment, and found that it would.

Having established that: where could we get vegetable matter in sufficient quantity and at the right price? A local vegetable market was approached and there it was found that unsold and unsaleable vegetables could be obtained in worth-while quantities, and into the bargain the vegetable

sellers welcomed this solution of a disposal problem that had long worried them.

From the local market, connections were successfully extended to all the chief vegetable markets in the London area.

Our original enquiry into the possibility of using vegetable matter as a fertiliser was not, of course, a haphazard decision, but the purely technical considerations involved are not relevant to this article. The main point is that, with the complete withdrawal of our established raw materials, executive ingenuity and action were exercised.

While experiments in producing the new fertiliser were going on we decided not to discharge any of our employees. Apart from the humanitarian standpoint we realised that, if the venture proved successful, we should need all our trained and experienced manpower. To allow an initial set-back in business to stampede us into a campaign of precipitately "firing" staff was not only entirely against our policy but it struck us as also shortsighted, uneconomic and inimical to national interests at the present time.

At the moment of dictating these notes our vegetable experiments show such promising results that we are already preparing for the line to develop into a permanent big-seller.

Further Possibilities Yet

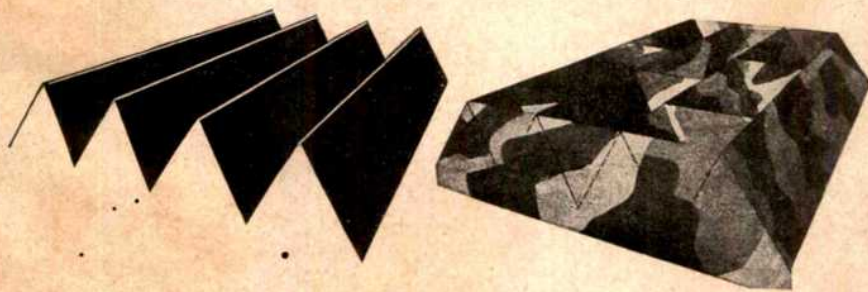
But our examinations into new lines did not finish here. We asked the question: What other waste products could be turned into similarly useful products, using the plant, staff and markets already at our disposal? What other waste products can be converted into fertiliser?

We sell to agriculturalists and to farmers. Have they any waste that can be utilised?

Many of them had chicken guano, which was entirely wasted. We examined the possibility of this material, and an experimental method of treatment again succeeded here. Our chemists, our plant and our labour could handle it; so again we have a new line under development. Not only so, but our plan of buying waste from our customers will still further increase the goodwill existing between us.

Our greatest achievement, however, in this examination into waste matter concerns our experiments with town refuse.

We May Yet Need Camouflage



Saw-tooth roofs of factories are particularly conspicuous from the air, and are the most difficult to camouflage. Here is one method (right) that confuses the pattern by breaking up the symmetrical lines. Painted screens erected between roofs and at the wall edges of roofs are used to accomplish this. The illustration is taken from a booklet on Industrial Camouflage issued by a well known London firm of paint manufacturers. Copies are free to readers of BUSINESS. Address requests to the Editor.

At this stage it is not possible to reveal any details of our progress here, but I can say that we have evolved a method of handling municipal waste and of converting a high proportion of it into valuable fertiliser. I can also say that, if final results of the experiments bear out the promising indications of the early trials, then here will develop a tremendous new industry. It can be said that this waste, which now costs ratepayers of the country millions a year to cart, dump and destroy, will be converted into a profitable fertiliser and turned back into the land.

The Value of Reading

One little point I ought to mention here, as it has some bearing upon our successful venture into new lines.

During the time when our business first faced the crisis I read a book, by a foreign industrial chemist, on some of the attempts to utilise waste made by middle European countries that were being "starved out" in the last great war by the British blockade. And I must admit that our thoughts about new lines were not uninfluenced by the achievements of those foreign chemists who worked under that most powerful stimulus—*dire need*.

It may be, therefore, that our lines of research were not entirely original. But it is probably true to say that one of the secrets of successful business is the ability to adapt other people's ideas, to perceive the value of other people's experiences and to profit by them.

That is why business men should read, especially their trade papers and publications that deal with business and industrial affairs.

So our business today, in contrast to being wrecked by the war, is preparing to develop beyond all original plans.

Without disclosing any secrets I have now on my list, as a result of our "crisis thinking," at least three or even four more waste materials which show a good prospect of being convertible into a product of commercial value—and surely there must in every factory be something or other, however small, which has a value in time of war.

What are you doing with your "waste" materials: paper, old books, rags, packing cases, metal, fibre, etc., etc. Is there anything going down the drain which can be separated and salvaged?

We have, of course, in common with all firms, felt the pressure of rising costs and increased restrictions, so we have made economies.

Our transport has naturally been affected by the petrol rationing, despite the fairly satisfactory supplementary allowances we have been granted, so we made economies here.

For example, to collect some of our waste materials the law compelled us to operate at night. But transport operation in the blackout involved increased risks, a greater time factor

and more physical strain on drivers, so we sought and obtained official permission to operate in the daylight.

In addition, we re-organised and intensified our journeys so that even more ground could be covered in *four* days' working than in *six* nights. By this method we were able to increase the collection of raw materials to an extent that enabled us almost to double business in our organic fertiliser. In addition, we were able to conserve two working days in which our vehicles could be devoted to collecting our new line, waste vegetables, and other materials. This arrangement enabled us to reduce transport costs.

As well as such organizational economy we are naturally giving close attention to securing the utmost mechanical economy. For example everything possible is being done to increase the petrol mileage, and to keep all vehicles in tip-top condition.

The efficiency of transport vehicles

depends to an enormous extent on the drivers. To have their wholehearted co-operation (as distinct from merely their *paid* for co-operation) in this direction is a great factor.

And I must say here that such has been the appreciation of our men for the policy of keeping all their jobs open—without wage reductions—that official hours of working and other things of this sort are often willingly exceeded in the endeavour to keep the wheels of industry turning.

Every man and every machine is working at highest efficiency, and whilst the turnover in our usual products has been reduced by at least fifty per cent. we have, within six weeks of the outbreak of war, succeeded in bringing output back to almost normal level—and moreover we are helping the Ministry of Agriculture in their endeavour to grow more food—and in this way serving our King and our Country.

To-day, Departmental Stores are Most Active Retail Outlets

Says MANUFACTURER of a Famous Stationery Line

OF all shops, especially in the provinces, the big department stores seem to be coming off best in the black-out. Investigation into the reasons for this point to two facts:—

1. "That the wealthy chain departmental stores can afford to do a really thorough job of blacking-out and consequently can have a blaze of light, warmth and comfort inside the premises.

2. "That *all* women and most men who do their shopping after dark much prefer to stay in these well lighted premises and to purchase as many as possible of the various things they need rather than grope about in the dark for the numerous less well lighted individual shops.

"Our own sales returns show a 15

per cent. rise for the month of October, and 16 per cent. for the first half of November in provincial department store business. Though incidentally I ought to add that no such rise is evident from department stores in London's West End. The prolonged closure of various underground railway stations serving the Oxford Street area are not unconnected with this failure of the West End stores to buck up.

"Buyers in the provincial stores have told me they have an increase in charge accounts indicating (a) more people are starting to use those stores regularly and (b) that they are purchasing wider ranges of goods, a charge account being more convenient for this purpose than having to pay cash to several departments at each visit to the store."

How to Keep Up The Health of Night Shift Workers

By Dr. H. E. COLLIER

EXECUTIVES know that some people prefer to work by night and to sleep by day, apparently thriving upon this *régime*. Nevertheless, among those volunteering for night work there are usually some who are actually unsuited for such work and volunteer for financial reasons or because they are unable to obtain day-

time employment. It is important, therefore, that a medical watch should be kept even upon those who maintain that they like night work and wish to continue it.

As far as general health is concerned, the main problem of night work is that of how to keep fit whilst doing it, rather than that of the prevention

of any particular type of disease. The early days of night work constitute a period of special health strain and liability to illness, lasting until the normal rhythms of sleep, digestion, etc., have been reversed, and a new physiological rhythm established. During this period particular care to avoid exposure to chill should be taken and a watch kept for the signs and symptoms of over-fatigue.

It is important to have a hot meal during the night, and open-air exercise and deep and peaceful sleep during the

day; the latter being dependent on the amount of noise around the sleeper and his ability to "inhibit or shut off his attention." Other things being equal, people of a phlegmatic temperament are best suited to night work, the anxious, apprehensive, highly strung temperament being peculiarly unfitted for it.

For obvious physical reasons young adults, and those with either a history of gastric disorder, and anæmic tendency or a known liability to respiratory disease—especially tuberculosis—should normally be excluded from night work.

In relation to the length of time that a night shift is worked, Dr. Collier points out that if changes from night to day work and *vice versa* are frequent acclimatization will never take place. He tentatively suggests that a lower limit of 4-6 weeks and an upper limit of 3-4 months are desirable, provided that unsuitable workers are not selected or are not allowed to continue on night work already begun.

The above is extracted from an article, *Health On the Night Shift*, by Dr. Collier, published in a recent issue of *Industrial Welfare*.

A Plan for Bringing Back the 'Empties'

By G. B. BEATTIE

With the present acute shortage of packing and other materials the problem of how to get back the 'returnable' container is a very serious one for many manufacturers.

MANUFACTURERS of products distributed in *returnable* containers of any kind are usually up against one permanent problem: how to ensure a steady return of "empties."

In the peak seasons this problem becomes especially acute. But unless all the factors are carefully analysed, it will not matter how many deliveries of new ware are made, the producer is likely to find that, just when he most needs them, he has no vessels to fill.

Until recently this situation was looked upon by my firm, who are general bottlers, as a normal accompaniment to the seasonal rush. I was asked to analyse the position and suggest remedies. The following plan was the outcome. It has proved to work satisfactorily, I therefore pass along the information in the hope that other users of returnable containers may benefit.

1. This Incentive Made Salesmen Effective Collectors

Our carter-salesmen were paid a fixed wage and a commission, the latter having at first consisted of a percentage on sales, but at the time having been modified to a flat rate on every dozen sold, and every dozen of 'empties' brought back. I found, however, that this small payment on empties had little effect in bringing the bottles back when they were required.

The men concentrated on sales, and left the collection of empties until they had "more time." My suggestion was that we pay no commission whatever on sales, but give a more generous one on all bottles brought in.

My colleagues did not take kindly to this idea, but agreed to give it a trial.

We received far more empties during that winter than we had ever done

before, some of the labels showing that some consignments had been "out" for years.

When summer came the "empties" problem was found no longer to exist, and we had to buy much less new ware than ever before. The men had larger wage packets, and the plan had no repercussions on sales, as these chaps recognized that if they did not keep on their toes to effect new sales, the "empties" source of income would soon fail.

2. This Idea Made the Retailers Help

I also found, however, that at the first hint of a heat-wave, some retailers became panic-stricken and ordered far in excess of their requirements. The carters brought in no empties, simply because there were no empties to bring in.

We therefore tightened our record system, placing the worst offenders on

a basis of an equivalent number of empties or no supply. We lost one or two "awkward" customers, but the general result justified such loss.

3. Finally, the Users Co-operated, too

Siphons proved difficult. These cost us about 5s. each, and we charged only sixpence on them. I therefore started a ledger showing exactly where every vessel was, and if the stock in any particular case was out of proportion to the turnover, I had a tactful talk with the retailer.

I found, however, that some of these people had great difficulty in getting back the vessels from their customers, so we supplied them with duplicate books of gummed labels which could be affixed to each siphon, the duplicate recording the whereabouts of the container. Sometimes people did not return the siphons because they had forgotten where they had purchased them! We therefore announced that in such cases the deposit would be refunded at our factory. Although this complicated our records, it was surprising how many vessels which had obviously been out of use for a very long period were thus reclaimed.

BUILD Your Own SHELTERS

The Government is using a new high-speed method of repairing damaged bridges. It is based on the unit-construction principle. This new air-raid shelter is designed on the same plan. It can be bolted together by unskilled labour in extraordinarily quick time.



Cutting Costs to Meet . . .

Eliminating Overlapping Products

THE publishing business, as hard hit as a good many industries by the exigencies of war, is setting good examples of constructive economies that can suggest similar expedients to firms in other lines of activity.

For instance, publishers have been quick to realise the extent to which many of their publications overlap. Two papers, *Modern Woman* and *Modern Home*, to quote but one example, have been merged by their publishers.

Editorial talent has been combined to produce a single paper which, it is claimed, will be better than either, while the many expenses of producing two separate papers will be cut down.

Quite a number of publishers have done this, but before 1940 is very old the list of "merged" papers will be a long one.

In the manufacturing field there is great scope indeed for a similar reduction and combination of types, sizes and qualities of products.

Concentrating Processes

ANOTHER economy being carried out by publishers is the simplification of "press day." Where a number of periodicals are "put to bed" on different days of the week, concentration is being arranged so that making-up and printing can be done more nearly as a continuous process. The mechanical side of publishing is expensive; this

tighter arrangement brings costs down considerably.

Cheaper Substitute Materials

SOME very useful economies, too, are being made by using alternative printing stocks. Paper prices have gone up more than 50 per cent. over pre-war levels. By exercising very keen discrimination in selection publishers can, however, find stock, at lower prices, that meet most requirements in the way of "body," printing quality, appearance, "handling," etc. Saving in costs in the region of 20 per cent. are being made in this way.

Keeping Up The Value

MOST publishers are compelled now to run fewer pages in their publications. Value to the reader can be kept up by using smaller type on some of the editorial pages. This means that more matter can be included. Smaller type actually costs more than the larger type to set, so that this is not a direct cash saving. It is, however, offset by the fewer number of pages and the goodwill preserved by giving the reader as much as possible for his money.

Cost Saved by Material

THIS juggling with paper is the equivalent in manufacturing industry to finding cheaper alternative raw materials.

Which reminds us of a desk calendar manufacturer whose raw material, light gauge sheet steel for the backs of calendars, became almost impossible to obtain, owing to government control. A moulded plastic was too expensive, but a synthetic fibre board was found. This introduced a 20 per cent. saving in cost and enabled production to be carried on.

Cost Saved by Process

RISEING costs of these calendars was further met by a reduction of "editorial" and printing costs. Formerly, on each leaf, representing a day of the month, a slogan was printed. These, totalling about 2,500 words, are now being omitted as non-essential. There was also wording on the back of each leaf. By omitting this a complete "machineing" is saved. Total saving here, about 25 per cent. of original costs.

Avoiding Price Raising

A WELL known fountain pen manufacturer, faced with rising prices and government control of the metal ornamental bands and pocket clips, has been able, by omitting these parts, to avoid increasing the price of his best selling 10s. 6d. popular model.

This manufacturer specially advertised these changes and the price maintenance to half-a-guinea, and is keeping up his sales.

Catalogue Costs Cut

A FASHION house has cut the cost of catalogues by more than 35 per cent. through the simple expedient of avoiding to make half-tone blocks from photographs and using, instead, line blocks made from artists' line sketches produced for the firm's newspaper advertisements.

Line blocks also enable a less expensive paper to be used. Clever typography, however, makes the catalogue, to the non-expert eye at any rate, appear quite as attractive as formerly.

Keeping Contact at Less Cost

MANY firms, having reduced their press advertising, are using "News Letters" directed, through the post, to selected customers and prospects.

We are getting many examples of these news-letters. Most of them are not actual selling shots, but are friendly, newsy, "talks" about business points of mutual interest.

Some are printed, some merely "duplicated" on the simplest of office machines. But by reason of their being "news-letters," colour, illustra-



SIMPLIFIED CONTAINER SAVES 60% COSTS

Without sacrificing anything of good appearance or usefulness this container embodied many economies for the manufacturers of these luminous products. As originally designed the container had a self-erecting back to act as a display card and was printed in four colours. As shown here, redesigned to reduce costs, it is without the elaborate back, yet is still a useful "sell-out" container for retail counter display. Also, in white with only one colour (royal blue) it presents even more of a "quality" appearance. Saving in container costs were in the neighbourhood of 60 per cent.

War-Time Budgets

and other elaborations are so they are cheap to produce.

House Organ Costs Cut

SOME firms that formerly published a House Organ in proper booklet style for distribution among their contacts have replaced these with the less expensive news-letter. One firm manufacturing electrical goods told us that already, after only two issues of their news-letter, they have had more replies, comments and contributions from recipients than were brought by six months' issues of its former 20-page house organ. Yet the former costs 28s. per 1,000 to produce while the latter costs, with blocks and other expenses, nearly £12 per 1,000.

This Idea May Stay

IT may well be that this war will firmly establish the news-letter as an additional and specific form of direct mail propaganda.

Reducing Transport Costs

TRANSPORT is a prolific source of headaches to executives these days. In one firm we found the transport manager concentrating on a re-organization of his routes so that, wherever possible, required collections of bought materials could be synchronized with scheduled deliveries at the same spot or in the same area.

This meant that the transport manager worked in close contact with the buying as well as the sales departments of his firm.

This arrangement was not made so much with the idea of saving cost as with the object of getting vitally needed materials for production that the suppliers could not deliver to time. In so far as it was able to do this, however, the measure was a money-saver.

Cash and Carry

A SPECIALIZED building material manufacturer recently circularised all his customers with an appeal to provide their own vehicles and to make their own collections where they possibly could. He notified them that he would have a loading staff on duty 24 hours a day so as to give customers' drivers and vehicles every facility for loading and getting away.

An incidental to this is that customers' drivers were given free use of the firm's well equipped canteen.

A director's comment was that customers had given him wonderful help in this arrangement. Many lorries which had come long distances to make

In what these other firms are doing you may find a suggestion or idea that will help solve one of your own problems

deliveries in the area had called to pick up collections. From short distances many vehicles had made special collection journeys.

Same Work from Less Staff

IN a City office small re-arrangements of work and personnel at various points have produced worth-while economies.

When a counter-reception clerk left at the outbreak of war, she was not replaced. Three typists in the central typing dept. were selected to take turns doing a day each on the reception counter.

The typist who is "on" takes her machine with her and carries on with her typing work. Her total output during her counter day is a trifle less than normal, but not so much less as to affect the far bigger advantage of having work done as well by three girls as was previously done by four.

Utilising Juniors

IN this same firm three messenger boys, when they are not actually out on errands are being taught stock-keeping. Already the senior youth of the three is proving an efficient substitute for one of the stock-keepers who has been called up.

In the lunch hour juniors (youths as well as girls) are allowed to teach themselves typing. In fact they are being helped in this by some of the regular typists. The management are encouraging it. Some of the juniors can now handle the typing of addresses, simple listing, and so forth.

In this firm each executive formerly had his own secretary who did her own filing. Today, eight executives are served by only five secretary-typists. One junior girl does all filing. The arrangement, less costly, works satisfactorily.

Three-Fold Economy

MUCH time and labour has been saved in the City Sales office of a textile firm by dividing up the dispatch of goods ordered. Formerly, all goods bought at this office were dispatched from stocks held on the premises. Now, orders are taken as usual but all large orders are 'phoned through to the firm's branch factory on the outskirts of London.

This has enabled the City office to reduce stocks by about 75 per cent. and close down two large stockrooms that will save about £600 a year in rent and rates.

It has eased the work of staff, allowing them to get away earlier and has also relieved traffic congestion in the narrow streets of this quarter of the City.

"We should have been heaps better off if we had adopted this plan years ago," a director said to us, "but nobody thought about it."

Keep Workers' Feet Warm

A MIDLAND factory, installing in the shops a small internal "railway" to facilitate the handling of goods by female labour, did not have the concrete floor channelled to take the rails but put down a wooden floor to the flush height of the rails.

This makes the floor much "softer" and warmer to the feet. It removes a prolific source of complaint, especially in winter, from women workers.

PLANNED LIGHTING CUTS COSTS

Lighting, planned to suit the precise needs of work that is to be carried out under it, means direct economy in production. That is why this installation has just been put into the packaging dept. of Boots Pure Drug Co., Ltd. by a well known firm of lighting specialists.



TREND OF TRADE

The Peak of Prosperity Is Now In the Midlands

Writes CECIL CHISHOLM, M.A., Business Economist

IF it is still extremely difficult to do business, the general situation has cleared a little. Most of the pools are suspended; rationing will be applied to a few foods only; employment and shop sales have held up reasonably well. Nor have prices soared.

Price Rises Prevented

HOW far has the control of so many materials and prices succeeded in holding down the general price level? A rise of 23% in our own wholesale prices between August and October compares with one of 12% in Norway and of around 12% in the United States. Everything considered, the price controls have considerably reduced the possible rise, despite the amateurish methods of some controllers and control boards.

Its Serious, this Unemployment

THE volume of earnings throughout the country is difficult to assess. With at least 1,000,000 men withdrawn from production and a further 200,000 unemployed, it must have fallen by 10% to 12% since August.

In spite of the Minister of Labour's optimism, the employment situation is no credit to anybody. There has been insufficient planning for the very gradual tapering off of civilian supplies to meet the corresponding rise in war materials demands. Why should we have 1,400,000 people out of work, when already 1,000,000 men are in training for the various services, quite apart from A.R.P. and the old professional army of around 200,000 men already in France?

Actually, our productive forces have fallen by a net 1,200,000 workers since August 31st. Is this the way to make use of the country's man power and resources?

The net rise of 100,000 in the unemployed figures for October is not in itself so serious. It is largely confined to the luxury trades in and around London (55,000), to hotels and retail stores (46,000 together), with an additional 28,000 women registering for the first time in the hope of war work. Inevitably some thousands of stood-off A.R.P. workers with private incomes ranging from very little up to £2,000 a year are temporarily on the registers

as unemployed persons. Nor does the rise of 28,000 in November mean more than the entry of more women and girls into permanent work for the first time.

But the failure of the Government to keep civil industry running at the proper pressure is serious. Apart from hampering our war effort, it adds quite unnecessary expenditure to the £6,000,000 a day already going out on the war.

Something MUST be Done About Exports

INDEED the foresight and energy of the Government's planning for war have only been equalled by their shortsightedness and inefficiency in organising the economic effort. The worst witness to this is the fall of exports in October by 42% under last year. The fall of the same amount in September was no doubt inevitable owing to war-time dislocation; this second fall is inexcusable, because we know that Italy is cut off from German and Polish coal, of which she imports 8,000,000 tons in a year; the whole of Scandinavia will now be without its annual 7,500,000 tons; all the sales of South America formerly enjoyed by German traders are now open to us at a moment when America is strengthening her hold in Argentine, Brazil, Chile and Peru every day.

For us, as for Germany, the slogan holds true equally—"export or die."

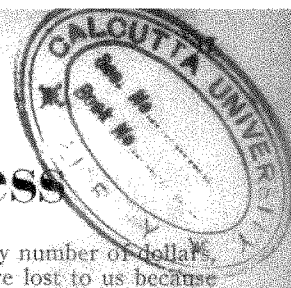
Little Life in Retail Sales

RETAIL business remains ominously patchy. The rise of 6.5% in shop sales for October masks a rise of 9.2% in the official cost of living, of probably around 10% in the types of goods with which the index is concerned. Probably the figure represents a net fall in sales of around 3% under last year, despite the food, footwear and black-out material booms.

The fall of 31.2% in Central London and the West End was to be expected; more surprising is the rise of 16.5% for the South of England as against only a 16.6% rise in the busy Midlands and South Wales. All luxuries from cars to cosmetics, from pearls to old prints, are still drugs on the market. Women are buying fewer and cheaper clothes the country over.



NOTE: The Retail Sales figure charted above is for September; the figures quoted in the text by Mr. Chisholm are for October.—Ed.



THE Voice of Business

Both the employment returns and shop sales show that London is hit not only by the drift of population from the centre, but by the black-out in the West-end and the reduced business of all the luxury trades and services. It seems unlikely that London business will improve seriously during the duration of the war. Afterwards it is doubtful whether the West End trade can expect to revive its old supremacy, in view of transport difficulties and the increasing attractiveness of shops and shopping amenities and entertainments in the great suburbs and in the smaller towns.

Buying Power: Watch this Trend

IN the meantime the peak of prosperity in the home market lies in the North and South Midlands, in Birmingham, Derby, Coventry, Northampton, Nottingham, Wolverhampton, Walsall (is Walsall the busiest town of its size in England?). Another patch of super-prosperity covers the West—Bristol, Bath and Exeter. But the cities where purchasing power is rising fastest, which therefore need closest attention, are probably the shipbuilding and armament centres of Newcastle, Belfast, Birmingham, Coventry, Glasgow, Liverpool, Oxford and Sheffield.

Large numbers of hitherto unemployed workers are still finding jobs in these centres. The complete employment of our population can only be a matter of months now. So far Mr. Ernest Brown is right. The pity of it is that unemployment should have been allowed to increase at a time when this was completely unnecessary, thanks to our civil market and export possibilities.

Help Keeps Down Inflation

HOWEVER much we or the Treasury may dislike it, our chief objective must be to avoid inflation. This Mr. Keynes's scheme of compulsory saving does possibly more efficiently than unlimited War Loan. But every business chief is concerned with the same problem. In so far as we allow costs to rise our prices must go up (control will only postpone the evil day), every rise in prices adds to the momentum of the present upward trend. In October alone the rise in the price level caused wage rises of £86,000 per week covering 600,000 work people. During November at least another 1,500,000 workers received similar rises, many of them based on the rise in the cost of living. This in turn will put up the prices of the goods they make.

Every improvement in management, every saving of labour, every little scheme that increases output from the same plant helps to keep down costs. This is the vital problem of the executive to-day.

THE voice of business is being heard again in Whitehall. But still only in whispers. First result—the pooling movement has been stillborn. The margarine, tea, sausage, jam and other plans are suspended, pigeon-holed if you like, but not finally scrapped. This thanks only to a few men who wakened up their Trade Associations, stimulated their local M.P.'s and roused the popular press.

Meantime the goodwill of every branded petrol has vanished overnight.

Use This

5-POINT POLICY NOW

1. *Abandon rural retreats and bring business headquarters back to Town.*
2. *Through your Trade Associations fight the 'Pool' principle wherever you find it.*
3. *Keep down costs by every possible ingenuity.*
4. *Improve your plans for training new workers.*
5. *Instal more labour-saving equipment and devices while you can get them.*

"It does my job quite well, this pool petrol. Why ever did I pay more for a fancy brand?" That, and not sighs for the favourite brand, is the motorist's reaction, friend advertiser.

The moral is obvious enough. Where the slightest threat of pooling exists, this is the moment to make a dent in the public's capricious memory with your brand name.

BUT materials are still the crux to-day. Where experienced business advice is lacking, some of the Controls are being amateurishly handled. Particularly in the case of exports. Perhaps top marks for a sort of Draconian thoroughness go to the Timber Control. How many exporters have heaved a sigh of happy relief at having got all their licences for material and shipping space, only to find timber for packing crates denied? And the civil servant's ideas of relative importance are interesting. One of the first cargoes in which every facility was given in September consisted of tennis balls for India.

On the other hand a Midland firm which has captured several foreign markets from Germany of recent years, failed to get a single export licence for its stuff during the entire month of September!

And of course any number of dollars, francs and pesos are lost to us because no import licences can be obtained for the little bit of material or one small part which is essential to the job. Fountain pen makers, for instance, are held up because they may not import a particular steel required for the valve lever on good fountain pens. The ability of our officials to strain at a gnat and yet swallow a whole string of camels must be seen to be believed.

THE trouble is that our authorities have induced a recession at the very moment when it is vital that business should expand to meet war burdens. More scope might usefully have been left to the small maker and exporter particularly to arrange his own imports of raw materials, his own exchange and finance, on the understanding that he sold no sterling abroad and used no British bottoms.

WHAT are you doing to develop your export business and to push a way into those markets from which the enemy exporters have been pushed out? That is the question we put, during the last month, to several famous manufacturing concerns whose brands are—or were—known all over the world.

Export manager of a well-known silk hosiery firm simply laughed at our query. "First of all," he said, "control of materials prevents us from properly supplying even the home market. We have our work cut out to keep our U.K. dealers sweet on the short supplies we can give them."

Next on the 'starvation' list come our already established overseas customers. We're having to cut them shorter still. How, then, do you think we can capture new export markets? On the contrary, we shall be lucky to avoid losing what we've already got."

FOUNTAIN pen manufacturer referred to above, said inability to get a few pounds' worth of special steel for valve levers was holding up scores of thousands of pounds' worth of finished products promised to established markets overseas. "Develop new exports?" remarked a Director, "if we could supply about one half of the overseas dealers we've been trading with for years we might then be able to think about it."

Once again a case of a manufacturer who'll be lucky if he's able to keep what he's got.

IN Wolverhampton for a few days, I found further evidence that the Midlands represent our present peak of prosperity. Of 72,000 workers on the

register, only 1,750 were without jobs. Of these some half were unskilled, others were unfit, or had been trained in antiquated trades. In short, Wolverhampton is very near complete employment.

Talking with some of the chiefs of the leading concerns I found that their problems in order of urgency were (a) materials, (b) shortage of skilled labour, (c) the finding of orders in certain trades, (d) output, (e) transport. How does this check up with your own experience at the moment? I should be interested to hear from you. It may enable us to serve you better on your war-time problems.

THE amount of time and energy that is being lost through companies and ministries migrating to the Provinces is incalculable. Even Trade Associations have allowed their headquarters staff to steal away in many instances. Of what use is the general staff 50 or 100 miles away from the business? It merely becomes an irritating clog in the efforts of the sales and production sides.

The time has come to recall all staff now housed in the country. Valuable records can stay. Nor need Trade Association staffs loiter any longer in the leafy West while the men in their industries are fighting with their backs

to the wall against often incompetent bureaucratic control.

SOME of my friends believe that very little dilution will be necessary this time. They instance machine tools in use now producing 8 times as much as their predecessors in 1918. They refer to the new tungsten-carbide cutting tools and other improvements. But I think the facts are against them. For although there are still nearly 70,000 unemployed in Glasgow and nearly 16,000 in Hull, there are only 2,300 in Derby, a mere 5,000 in Coventry and almost none in West Bromwich. The Midlands are on the edge of full employment of their man power.

Yet none of the services are using great quantities of either supplies or munitions yet. Should things become lively on any front, output will have to be speeded up in many directions. This can only be done in the engineering field by dilution.

I have never seen dilution succeed without the most careful training of the newcomers. The chief executive in any large concern will get his arrangements in hand for training unskilled youths and women as quickly as possible. Otherwise he stands every chance of being caught out in the Spring, which will be unpleasant for everybody concerned. C.C.

Securing Better Vision for Night Work

A NEW factor making for safety and efficiency in industry has been introduced through recent investigations which show that vitamin "A" not only improves night vision but relieves eye fatigue and strain among certain types of industrial workers.

It has been found, for instance, that the efficiency of certain colour matchers in a textile firm was increased by as much as 75 per cent by feeding to those deficient in vitamin "A" a specific in the form of malt extract with halibut oil, rich in vitamin "A." In addition, these workers reported that they had much more eye-comfort than they had previously experienced and, in many instances, stated that their general health had improved.

There seems little doubt that night-blindness and vitamin "A" deficiency can interfere seriously with safety and efficiency in business and industrial fields, especially in abnormal times such as exist just now.

"Night-blindness" tests are not yet well understood, nor their importance realized by the heads of businesses, even in those firms otherwise well equipped for staff welfare supervision. It is a factor, however, that will make profitable study.

Automatic Black-out Ensured By Means of This Switch

BLACKED-OUT, or heavily curtailed, windows do not always provide sufficient protection against light leakage. However painstaking one may be, there is a constant risk that the opening of an outside door may project a dangerous beam of light.

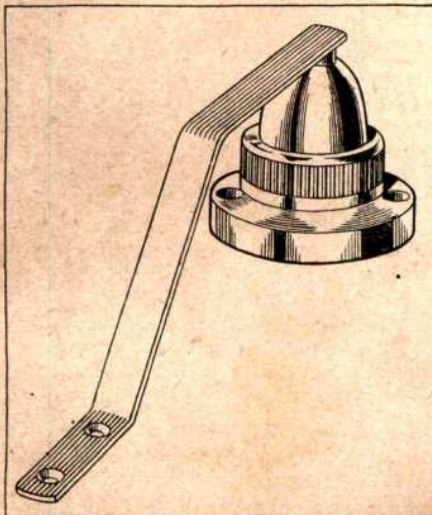
For doors through which there is continuous traffic—such as in departmental stores and some public buildings—the cost of the necessary but elaborate light

traps will be justified; but in private houses and similar buildings a less expensive but equally efficient arrangement is to be desired.

A neat and efficient solution of this problem is the "Black-out" Switch marketed by a Walsall firm, and designed to give automatic protection against light leakage. This special switch not only ensures that the light is instantly switched "off" as the door is opened but also switches the light "on" again immediately the door has been closed sufficiently to prevent leakage.

It is entirely automatic in its action and thus prevents the individual from making the very easy mistake of opening a door while the light is "on" or switching on the light before the door has been closed. For this reason it is especially applicable to the outside doors of houses, garages, outbuildings, military hutments, etc.

The switch unit is of all-shockproof construction and can be easily connected in the existing electric wiring. It should be pointed out that the unit is offered for use in alternating current circuits only and must not be employed on D.C. mains supplies above twelve volts.



75% Saving on

Name Plate Costs

MOST firms like the dignity of bronze and enamel name plates, both for outside fixture and for the internal identification of individual offices, etc.

Both the cost and the control, however, make bronze, brass, copper and other non-ferrous metals unobtainable today. Strikingly faithful reproductions in a synthetic material at one-third to one-quarter the original cost of these metals therefore is an interesting proposition.

Name plates to users' specifications can be made up at proportionately low cost, or many standard plates can be bought from stock. For example a small stock plate 2½ by 2½ ins. with four letters costs ninepence, while a 16 by 2 ins. plate with 13 one-inch letters costs five shillings. All plates are ready drilled and screws supplied.

The synthetic material does not tarnish and comes up well with a wax polish.

The Editor will be pleased to put enquirers in touch with the manufacturers of these plates.

New Ways to Cut Costs and Reduce Delays of Plant Repairs

By C. W. BRETT, M.Inst.W.

Managing Director, Barimar Ltd.

PLANT maintenance costs inevitably vary between considerable limits depending upon the product handled. This makes it less easy to single out instances in which charges of this nature are far too high, but, considering the subject broadly there is great scope for economy in upkeep expenses.

It is customary in large factories to employ a maintenance engineer. Even so it is frequently the accepted policy to fit replacement parts, not only when breakage has occurred but when excessive wear is evident.

Some industries are particularly hard upon plant. In them it has become necessary to find an efficient alternative to the old scheme of replacement, although any loss of efficiency or reliability cannot be tolerated.

One solution has been found by utilizing certain new welding processes introduced during the past year or so. There is no need to go deeply into technicalities; a few simple facts about what is being done are sufficiently enlightening.

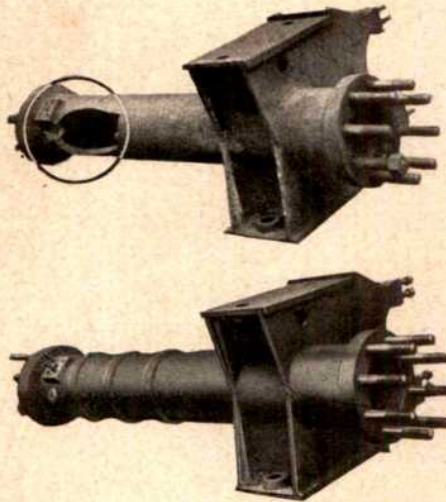
Reducing the time Factor

Until a few years ago it was considered necessary to pre-heat cast and malleable iron parts before welding could be commenced. Such time-wasting and costly procedure is now a thing of the past. By use of special apparatus and a changed technique on the part of the operator it is possible to commence fusive repair work without preliminaries. In cases where subsequent machining is not necessary a part can often be welded without being removed from the machine to which it belongs.

Still greater progress has been made in the handling of steel parts. In cases of wear, instead of a replacement being fitted specially hard steel is fused upon the defective places. After machining, these are actually better able to resist further trouble than a new part. And the work of repair seldom exceeds one-fifth of the price of a renewal.

The process used in such cases relies upon a method which envelopes the point of fusion in hydrogen. This apparently simple measure has revolutionized work of this character, for in the past pit marks were a common occurrence due to the unwanted attention of the oxygen in the atmosphere for the molten metal.

The strength of welding work carried



Top: High pressure hydraulic cylinder with large piece broken out of barrel, and several cracks. Weight one ton. Length six feet.

Lower: The same hydraulic cylinder repaired and barrel reinforced by welding. Tested to 6,000 lbs. per sq. inch. This welded repair showed a double saving: (a) It was far less in actual cost than a new part; (b) It enabled work to be restarted many weeks before a new part could have been obtained.

out by this new method is outstanding. For example, hundreds of broken crankshafts are reunited during the course of twelve months. Further failure is unknown. In any event the owner is relieved of all risk, for welding repairs by firms operating on a scientific basis carry a "money back" guarantee.

In some instances savings effected are not merely the difference between a repair and a replacement part. The time saved, for instance, in getting, say, a key machine into operation following upon a breakdown is a vital factor in production.

Usually components weighing up to about 10 tons are sent to the shops of the welding engineer for attention. In all cases, however, in which transport

is impracticable, emergency equipment with the necessary operators are held in readiness for immediate despatch.

Much of the work undertaken by the emergency squad concerns the reconditioning of boilers. In the past riveted patches were regarded as being the only solution when plates had become weakened by long usage. Now money can be saved and unsightly repairs avoided by fusing new metal on to old plates so that the original thickness is restored.

More Metals can be Welded

More executives should be aware of these facts. And although reference has been made only to developments in welding of ferrous metals, equal advances can be reported concerning alloys. Elektron, for example, has such a large magnesium content that in the form of filings it is most inflammable. Nevertheless this ultra-light-weight material is being welded with complete success.

At one time copper and aluminium presented certain technical difficulties to fusive treatment. To-day these and other problems have been solved effectively. Even metals having fundamental differences can now be welded together. For example a process perfected towards the end of 1938 enables steel to be welded to cast iron. This affords the opportunity to impart a big increased margin of strength to certain types of cast-iron components which have showed certain weaknesses.

There are other ways in which the fusive engineer can give increased strength to parts which might otherwise be consigned to a scrap heap. For a small sum of money these can be made to give more reliable and economical service than that which could be given by a duplicate.

As needs of industry vary so widely it is hardly possible to be more specific here. But the aims of management to cut costs embraces every business. The methods described indicate at least one way in which maintenance costs can be cut with an actual increase in efficiency. And that fact is of interest to all executives.

Weighing Instead of Counting Saves Time

EVERY expedient than can save time and labour is worth looking into. In controlling stocks of small parts many firms could adopt the method used in some well run concerns of weighing, instead of counting quantities.

Handy and simple types of weighing machines are on the market that enable a youth to do in an hour an amount of

stock checking that would ordinarily take him a day.

All that it is necessary to do is to make an initial counting of the various small parts that go to make up a convenient unit of weight. List these quantities and weights and thereafter do all "counting" by simply tipping the parts into the scale pan and reading off the results.

For the Small Firm: How to Hold Down & Control those Overhead Costs

By **LESLIE G. JEFFRIES**

Cost Accountant, Presswork Products Ltd.

MANY small manufacturers whose businesses have been jeopardised rather than helped by the war must give primary attention to a systematic and scientific collection of all items of overhead expenditure to enable them to cut out completely every unnecessary expense and to consolidate on a more economic basis.

A simple yet accurate costing system can be efficiently run by one cost accountant or cost clerk. The non-elaborate, uncomplicated system outlined in this article should prove of immense help to the small employer unversed in modern costing methods, and if he keeps to the main principles set out hereunder, he will be able to adapt the system best suited to his own particular business.

It is essential to state first of all that the factory administrative staff must be competent and reliable, for the correct allocation of all items of labour and material on their respective job cards and stores requisitions is of paramount importance. The cost office relies to a considerable extent on the correctness of the factory records which ultimately reach it and if through incompetence, carelessness or deceit, these records are false, the system is rendered useless.

Standing Factory Orders

In order to differentiate between productive and unproductive labour and materials, a series of standing factory order numbers or codes is drawn up, each overhead item having its own distinguishing mark. For instance, Plant Maintenance might be allocated the number 100, Idle Time 101, Labouring 102, Defective Work 103 and so forth.

This list is given to the factory staff who will thus be in a position to book the appropriate numbers (or codes) on all labour and material records relating to overhead expense. Productive jobs, of course, would also have their series of numbers, but must be kept distinct from the non-productive, to avoid likely confusion.

Official Orders Outwards

Orders are best in book form, the top copy, printed in full and perforated, for the supplier, the second copy, unprinted and perforated, for the Stores,

and the third copy, unprinted and fixed, to remain in the book as a permanent record.

These orders should be numbered consecutively, and a space left by the printer before each number in which the buyer can write the appropriate job number, whether productive or unproductive. Thus, 100/22 would show that Order No. 22 related to a purchase for Job 100. The cost clerk, when allocating purchases—see next paragraph—will be in a position to link up the invoices with the jobs to which they apply, whether productive or unproductive.

Allocation of Purchases Invoices

Have a rubber stamp made up with the following headings:—

Order number	Bought Journal.
Quantity.	Charged to.
Price.	Passed for
Extensions.	payment.

Every purchase invoice is stamped with this upon receipt. The first three items are checked and initialled by the buyer after reference to the order book, the order for which is cancelled if the goods are correct, and the goods inwards sheets referred to in the next paragraph.

The next two items are attended to by the account department, the "charged to" by the cost office and the last item by the person in authority such as the General Manager.

When the accounts department has collected all these invoices duly initialled, it draws up a monthly summary of purchases from the allocations and hands it to the cost clerk. These will be divided into a total of the productive or manufacturing purchases, and the overhead of unproductive purchases in detail and total.

Goods Inwards

The Stores will book-in all receipts on a Daily Goods Inwards Sheet, containing the following headings:—

Supplier, Advice Note, Description, Quantity, Order No., Remarks.

From these sheets, worked in conjunction with the order book, the deliveries can be checked by the buyer as above referred to. Any information relating to faulty material, weight discrepancies or gauge differences are entered in the "remarks" column by



the storekeeper and taken up with the suppliers by the buyer.

Material Requisitions

This is important, see that it is rigidly observed: No material must be issued from the stores without a requisition containing the job number applicable to it.

These requisitions eventually reach the cost office where, after pricing, they are posted to their appropriate jobs. Many of these items coming through on stores requisitions will have been allocated already through the purchases invoices and a check must be made to avoid debiting an item of unproductive material twice to its job account.

The exceptions will be such items which, originally purchased for productive jobs, have finally been used for overhead jobs.

To enable the cost accounts to interlock with the financial records, transfers must be effected between the cost office and the accounts department to enable the latter to agree in detail with the former, and to present an accurate monthly summary.

Job Cards and Wages Analysis

Each employee will have a separate job card for every job, whether productive or overhead. The Standing Factory Order numbers are used for the latter and if each job is clocked on and off correctly the total of the job cards in both time and money will agree with the totals on the daily time card, assuming that all jobs are worked on a time basis only.

If a piecework or bonus system is used—and it is always advisable to put as many jobs as possible on some sort of piecework basis—the total job card earnings will be in excess of the total dayrate earnings for the week, and the difference will be added to the time card which should show the employee's weekly earnings for transfer to the wages sheets.

The works clerical staff will write the job numbers on the cards before

handing them to the workman and it is important that an Idle Time number should be included to enable him to clock on and off in the event of plant breakdown or other causes.

The wages sheets are ruled into the required headings, the first three being gross wages, deductions and nett wages, all entered by the wages clerk from the daily time card totals.

Then follow columns for productive labour and the overhead labour headings, entries being made from the individual job cards by the cost office. Thus Smith's gross wages of £4 might comprise, £3 productive, 10s. Stores, 5s. Defective Work, and 5s. Inspection.

A total weekly analysis having been prepared, figures are ready for transfer to the oncost sheet which is drawn up monthly, preferably in calendar months with four months comprising five weeks. We have already dealt with the material overhead purchases and are well advanced in our programme.

"Fixed" Overheads

We have still to collect certain overhead items which are more or less fixed, such as Rent and Rates, Salaries, Insurances, Power, Lighting and Heating, Depreciation, and the Selling and Administration expenses which include Office Salaries, Commission, Travelling Expenses, Bank Charges, if any, and Audit Fees.

A word of caution is needed here as some of these headings come through at infrequent periods on the purchases

summary sheets prepared by the accounts department, *e.g.* Rent may be "invoiced" every six months and Fire and other Insurances every year. Lighting, Heating and Power, too, will not come through every month. Treat all these and similar items as follows:

Salaries, Travelling Expenses and Commission:—Monthly payments for these items are handed to the Cost Office by the accounts department for inclusion in his Oncost Sheet. They will not appear in either wages analysis or material purchases summaries.

Rent and Rates, Insurances, Power, etc. and Audit Fees:—Estimate these, preferably by a perusal of past Balance Sheets and on observation, and allocate in twelve equal monthly proportions. Ignore, therefore, these items when they appear on the purchases summaries as your oncost data will be inaccurate if you include them only as and when they are invoiced. Depreciation and Bank Charges will never come through the normal channels, but you must allow for them, also, in equal monthly sums.

It should be mentioned here that other "floating" overheads such as carriage, postages and telephones, printing and stationery will come through in the usual way on the purchases invoices summary list above referred to, the word "purchases" covering all items of expenditure other than wages, whether a ton of steel, a telephone account or an insurance premium.

Don't miss any item of overhead ex-

penditure out of your final summary, whether they are obtained from the wages analysis, the purchases invoices summary, the stores requisitions, monthly allocations for items such as Rent and Rates, Power, etc., or upon estimation from past Balance Sheets, *e.g.* Depreciation.

Monthly Oncost Sheet

The Monthly Oncost Sheet can now be prepared. We are assuming in this article using a percentage on direct labour as our method of apportioning overheads to jobs because the rates of pay of the small manufacturer will not vary to any great degree, and he will not have many types of labour to consider.

The Oncost Sheet will contain columns for (1) Productive Labour, (2) Factory Expenses in detail and total, (3) Selling and Administration Expenses in detail and total, and (4) Total Expenses, (2 plus 3). Assuming that column (1) totals £2,000, and column (4) £3,000, the percentage of overheads to be used in estimating will be 150%.

Monthly percentages will vary, and the employer must study in detail every overhead item, see where increases month by month have occurred, and summon his work staff to give reason for such increases. By so meeting with his staff and impressing upon them the importance and necessity of keeping down overheads the employer can save a considerable amount of money which is, in effect, clear profit.

Rebuilding a Business without Increasing Turnover

By **KENNETH E. GARCKE** *Managing Director*

Electrical Press Ltd., and Subsidiaries.

ON being asked why it is that our organization today is quite prosperous I must first answer that it is essentially through the hard work and loyalty of the staff.

Four years ago when I joined the company, on my birthday to be exact, I was faced with the urgent problem of trying to find sufficient money for the weekly payroll. As the Chairman then said to me the affairs of the company were in a "very grave condition."

We publish a considerable number of trade and technical papers, popular engineering periodicals, such as *The Model Engineer*, and handbooks. Most of these were at that time making losses, and most of the machines at the printing works were in a deplorable condition. Yet the business was nearly forty years old, and had had its good years.

What then was the trouble? Hardly an easy question to ask a young man in his late twenties who was without previous business experience.

Cambridge, reading in chambers, with eventually a small practice in the County Courts, this was my background. Perhaps the legal training

gave me the qualities which were so necessary to tackle the problems before me. Perhaps it gave me the ability to weigh up the pros and cons; the ability to sum up the worth of the staff, and above all the ability to exercise a reasoned psychology.

Lack of actual knowledge of printing and publishing, to my mind, was an advantage. It enabled me to apply a clearer mind to the question, to jerk the staff out of the routine groove into which it had slid through lack of careful managerial driving during the last ten years. By doing unorthodox things, by apparently ignoring the habit of the house or the tradition of the trade, it made the staff start thinking for themselves again. At the same time, by the process of cross-examination I was able quickly to pick up the essential necessary details.

**From
Heavy Losses
to
Big Profits
in
Four Years
that is the story of this
business achievement**

It didn't take long to see the reason for our troubles. There seemed to me to be four.

(1) There had always been a constant effort to increase turnover regardless of cost and whether the turnover was of any value.

(2) There had been a frittering away of money over a period of years in so called development of publications when the same money should have been spent over a few months. A publication must be made to go with a "bang," straight away. If it doesn't, my advice is: stop it.

(3) The products were not being continually improved and modernised in those small ways that help and enliven the salesman who is living with the job.

(4) The printing works were over-worked at the end of each month; almost at a standstill at the beginning. The load factor was bad.

The first three troubles were easy to cure. You see I had complete control of policy and, above all, held a tight grip of the purse strings. I cut down turnover by stopping several publications which were never likely to pay and spent money, out of the small loan I was able to raise, upon others. The effect was that the turnover did not vary—in fact to this day it hasn't increased. But the turnover is now a paying turnover.

Change is necessary in any business, especially in publishing. The company's publications are constantly being altered in cover design, make-up, paper and size of blocks. The one essential always remains—high quality and best obtainable editorial and contributions. Incidentally I must confess that many of our ideas are gleaned from American

publications which, in my opinion, are still far ahead of ours in publishing and print.

As an example of how we dealt with one of our publications which to-day is a most successful technical paper:

Giving The Buyer What He Wants

Fours years ago we had a paper called *Crushing and Grinding*, which was read by a small number of mine and quarry people. The paper was a failure yet a large sum of money had been spent on it over a period of years. The trouble with this paper was that it was dealing with only one process used in several industries. Crushing and grinding machinery, for instance, is used in the granite quarry as well as in the face powder factory. The paper was thus cutting across many instead of dealing with one specific industry.

If the Mining Engineer wants to discover something about grinding equipment he automatically turns to a mining paper. So I changed the name of the paper to *Mine and Quarry Engineering*, found the best possible editor, sent him, or a special contributor, to the Rand, West Africa, Scandinavia and Canada to make contacts and obtain first hand information, and then published a highly technical mining monthly in an expensive style.

Within three months the metalliferous mines throughout the world realized we knew what we were talking about. Result—quick success!

The fourth problem was not so easy. Today the printing works, with a staff of one hundred working day and night shifts, are in the country within handy reach of the head office, and incidentally of my own home. The

machines are mostly new and the quality of print perfect.

Four years ago the print was filthy and the decrepit machines were constantly breaking down. I was lucky in finding a young man, desperately keen, as works manager. He supplied the technical knowledge. We had to spend a little money on the machines to keep them running and then we concentrated our efforts upon altering the schedules of the publications so that the press dates were evenly spread throughout the month.

Even so, we were still busy at the end of the months. So we worked overtime. I maintain that it is far less expensive to work reasonable overtime than ever to run the risk of letting expensive machines stand idle. It's safer, especially in the event of a slump—costs can be cut so very quickly.

Cleanliness Throughout the Plant Meant Better Work

Our next effort was directed towards better print. I should think I must have sent back to be reprinted two or three thousand pounds worth of work during the first two years. This applied particularly to the work of the few outside customers I had succeeding in getting. I was regarded as being ridiculously fastidious—but it was well worth it. The quality improved beyond recognition. To-day, we also print for three outside publishing houses, who are well satisfied with the quality and service we give.

Another factor which played its part was again my fastidious desire to see clean machines and tidy and methodical works. The men are given time to keep the machines highly polished, and in the early days a sad fate met the man who failed in this duty. I argue that it quite difficult for men to produce dirty work when everything about them, including themselves, is scrupulously clean. I was right—results proved it. New Monotype setting machines, new Miehle presses, new motor vans have taken the place of the old—all without raising new capital.

These then in the broad outline are the reasons for the recovery, but it must not be supposed that many small factors did not contribute.

Single-Point Control, Plus Prompt Statistics

The company would never have recovered if the directors had not faith in the intrinsic value of the concern, if I had not been able to get the accounts department to give me a trial balance four days after the end of each month (incidentally, mechanization helped them to do this), and had I not retained complete control of all expenditure over ten pounds.

Experienced readers of *BUSINESS*, familiar with the elementary methods I have used, will say that the job, especially with regard to the

Continued on page 32.

Making it EASY for the Customer to Buy

Instead of signing a cheque for the full amount of your purchase

For Example:
This is a Banker's Order for a £6 purchase.

To *Natural Beauty* *Dec 15 1938*
Brown Plan & Co.

Please pay to Lloyds Bank Ltd., 39, Piccadilly, for the account of H. J. Nicoll & Co., Ltd., 120, Regent Street, W.1., the sum of £ : 10 : : and on the corresponding day of each month a similar amount until further notice (until a total sum of £ 6 : : : has been paid).

Signature *James J. Smith*

Nicolls invite you to sign a monthly Bankers Order for one-twelfth of the purchase price.

Payment by banker's order is recognised as one of the best acceptances from instalment purchasers. Usually, however, the time and trouble of getting the necessary form is left to the customer, the result is that the banker's order method is not used to anything like the extent it might be. By providing blank banker's order forms with catalogues, etc., Nicholls make it extremely easy for the customer to place his instalment order at once and to be supplied immediately on his initial payment.

Outstanding Ac/s. Reduced by 86%.

NEWSPAPER accounts present interesting problems. Although there is the advantage that the product and the price are firmly standardised there are, nevertheless, these two aspects of it: There is (a) the "manufacture" and sale of the newspaper (a *product*) and (b) the sale of advertising space (a *service*). Each type of business is being turned over in large volume every day. The difficulty was to get any accounting system to keep pace with daily sales of papers and space.

The "Express & Star" of Wolverhampton solved the problem with one general purpose accounting machine. After its installation accounts outstanding were reduced by 86 per cent. The statements are despatched up to the minute. A weekly balance is possible. To achieve these vastly improved results no overtime whatever is worked.



Photo:
Midland
News Assocn. Ltd.

This one book-keeping machine handles the entire system of accounting as described here.

A Survey published by permission of

MALCOLM GRAHAM

*Managing Director, Midland News Association Ltd., Proprietors of
"The Express and Star," Wolverhampton.*

THIS daily newspaper combines within its own accounting that of two weekly subsidiary papers. The total work which is handled by a general utility type accounting machine marketed by the National Cash Register Co. Ltd., is as follows:

1. Agents' Circulation Accounts.
2. Advertisement Accounts: (a) Pre-paid; (b) Short Credits; (c) Monthly, Quarterly or Agency Accounts.
3. Cheques and Cash Book.
4. Analysis of Purchases.

A review of the previous hand system reveals that the hand-kept ledger accounts were posted from a pre-printed despatch book which was summarised under agents' names. This was totalled each day in respect of the main newspaper and the agents' totals transferred to their individual accounts daily. At the end of the week the sales of weekly papers were added, the ledger accounts totalled and from them the weekly statements prepared and despatched.

By this method no details concerning returned copies were shown on the agents' statements and it was common

for nearly all returns to be deducted at the time of payment, the net amount only being paid, details of which had to be extracted from receipt counter-foils and posted back to the ledger account.

Since the introduction of the machines the despatch book has been altered by the addition of two extra columns to take care of the weekly papers, so that it now includes details of all publications. This has made it a complete record of all deliveries made to agents.

Records Now More Complete

From this despatch book, which contains daily totals of all papers delivered to each agent, the summary portion of the agent's statement is posted. Reference to the reproduced statement will show that it consists of two horizontal sections, "Details of Circulation Deliveries" and "Statement of Account."

The circulation delivery details are entered from the despatch book just referred to and the machine accumulated total of these postings is agreed with a pre-determined total obtained from the source of original entry.

This simple procedure provides the agent with full particulars concerning his deliveries. The second part of the statement, that concerning the financial account itself, is prepared in conjunction with the ledger card by means of inserting between the two a strip of carbon paper. This section of the statement is posted during the week in conjunction with the account card in respect of cash received, discount and any returned papers and at the end of the week the total deliveries of the three papers are brought down into their appropriate analysis columns and the total charges entered in the debit column, the balance to date being automatically computed and extended in the balance column.

Accuracy Is Guaranteed

The accuracy of the balance on each account is proved mechanically while the accuracy of the postings are proved by comparing the machine accumulation of postings with a predetermined figure.

During the preparation of the statements in this way a Circulation Journal Sheet is produced entirely as a by-product and this forms a complete weekly circulation return by agents.

Cash is posted from receipt counter-foils which are sorted into account order and listed to give a proof total. The operator posts the amount to both statement and ledger account, the balance again being extended without any other manual aid than the depression of a single key.

During this operation a Journal Proof Sheet is prepared in the same way as the Circulation Journal Sheet and forms a Day Book and valuable audit medium. The total postings as provided by the machine are checked against the pre-list in order to establish the accuracy of the work.

At the conclusion of both the debit and credit posting operations their totals are transferred to the respective debit and credit of a Control account which, being a balance between total debits and credits posted to the agent's ledger, will show, at any time it may be required, the total outstanding indebtedness carried on the agent's ledger.

The filing of the ledger cards and statements is in vertical visible equipment and from 600-650 postings per day are made to them.

Advertisement Accounts

Space will not permit of more than a very brief description of the procedure adopted in handling these accounts which in many ways closely resembles that for the agents' accounts. However, in this case the statement is quite straightforward, being a replica of the ledger account. The statements are rendered monthly or quarterly, according to the type of account.

There are approximately 3,000 advertisement accounts, and as these are sectionalised geographically and a separate journal sheet is furnished for each section the machine total of postings becomes the daily geographical analysis of advertisements.

It is sometimes necessary, as in the case of the big advertising agencies, to provide an invoice for every entry in respect of insertions made in cases of long-dated permanent advertising. For example, an order to advertise "Bovril" every Monday for one year might necessitate an advice to the agency each time the advertisement appears, although the account itself may not be rendered until the expiry of the contract or the end of the month or quarter. In this event an invoice is prepared at the same time as the statement and ledger account is posted by means of inserting an invoice form, together with an additional piece of carbon paper, between ledger and statement.

In this manner invoices are prepared as and when required, with negligible extra trouble.

An additional advantage conferred on the system by this method is, of course, that the invoice must contain identical information to that shown on the statement and the ledger card.

This particular ability of the machine to produce more than one related record at one time has provided a very big advantage over the previous hand system in so far as it has cut out entirely the transcriptive work necessary to transfer items from the despatch book to the agents ledger account and from the ledger account to the statement, an operation which is not only costly in time but also prolific in error possibilities.

Cheques and Cash Book.

The cheques drawn in payment of all suppliers' accounts and the cash book entries concerning them are both accomplished simultaneously. The cash book is provided with a columnar dissection of payments over four heads and at the end of the cheque writing work the machine provides automatically a total of the cheques issued which is entered at the

Difficulties About Raw Materials?

Read the Article on Page 9

foot of the cash sheet and transferred to a summary cash book. The cheques are then passed for signature and the detailed cash sheet filed in a binder. Approximately 400 cheques per month are written in this way.

Analysis of Purchases

Another job which this newspaper Office carries out on the National Accounting Machine is the analysis of their purchases into some 80 headings.

An account card is maintained for each one of these headings and the result of the analysis obtained from the purchases invoices is posted to each distribution head and a net purchases to date figure extended. By this means, a reference at any time to these accounts will show the quantity purchased to date under each classification. The grand total of these

individual analysis accounts is reflected in the grand control account the daily postings to which always agree with the total of the contra entries to the credit of the suppliers' accounts. In this way a complete daily and progressive purchase analysis is obtained.

The machine system, without increasing the staff, has cut out a great deal of overtime work which was necessary when working with the old hand-kept ledgers. Every account is kept in perpetual balance and the balance of all accounts in each ledger section is available at any time. The issue of statements is accomplished very much quicker than ever before and as an instance of this it was discovered that at the end of the first September quarter there was 86 per cent. less money outstanding than at the same time 12 months previously.

It is hard to overestimate the significance of such a fact, the prompt collection of debts having as it often does, a perceptible effect on the financial results of the year's trading.

The importance of the advantages mentioned in the course of this article are undoubted, but any advantage which may not be so readily apparent is the ability of the single machine to handle such wide variations in routine.

This ability is all the more important now that the exigencies of war have placed greater strain on clerical activities. It is now more than ever necessary to be in possession daily of the full facts and figures regarding the trends of business, and also to ensure that the overhead costs incurred by the accounts department should be as low as possible without impairing that essential department's efficiency.

The image displays several sample forms from the Express & Star machine accounting system, all for Queen Street Wolverhampton.

- CIRCULATION JOURNAL SHEET:** A large table with columns for NAME, DATE, and various circulation metrics. It lists names like BROWN, E.R., CARTER, P.J., CHARLES, T., CLARK, H., CURSON, H., DEW, J., DRAKE, P., ELSTON, F., FRANKS, L., GRIFFITHS, H., HARDWIG, N., JAMESON, T., KING, A.P., LARNEY, F., LINDSEY, T., and MARSTON, H.
- JOURNAL SHEET:** A table with columns for DATE, NUMBER, DETAILS AND TITLE, DEBIT, CREDIT, and BALANCE. It lists transactions such as "BILSTON AMATEURS, TOM JONES, HOUSE FOR SALE", "DRAUGHTSMAN WANTED", "SHORTHAND TYPIST WANTED", "HOUSE TO LET", "SEAMEN, HENRY BROWN", "DYAL TIME", "GARDNER'S CHOCOLATE", "FLAT TO LET", "JUNIOR CLERK WANTED", and "SALE, 14 GROVE ROAD".
- STATEMENT:** A form titled "Express & Star" with a header for "QUEEN STREET WOLVERHAMPTON". It includes a section for "DETAILS OF CIRCULATION DELIVERIES" and a "STATEMENT OF ACCOUNT" table with columns for DATE, NUMBER, DETAILS AND TITLE, DEBIT, CREDIT, and BALANCE. It lists transactions like "BROUGHT FORWARD", "FLAT TO LET", "JUNIOR CLERK WANTED", "SALE OF FURNITURE", "BY CASH", "BILSTON AMATEURS, TOM JONES, HOUSE FOR SALE", and "DRAUGHTSMAN WANTED".
- INVOICE:** A form titled "Express & Star" with a header for "QUEEN STREET WOLVERHAMPTON". It includes a section for "DETAILS AND TITLE" and a table with columns for DATE, NUMBER, DETAILS AND TITLE, DEBIT, CREDIT, and BALANCE. It lists transactions like "BILSTON AMATEURS, TOM JONES, HOUSE FOR SALE" and "DRAUGHTSMAN WANTED".

To provide management with a greater range of vital information, more quickly and more clearly set out, is a primary object of the machine accounting system. Yet this improved service is achieved with greater simplicity and with less clerical and supervisory effort than that required by the hand methods which it displaces.

Smaller Staffs Mean that You Must Get More Work out of your Office Equipment

By ERIC CAMPBELL

Office Manager, Simplex Supplies Company.

WHEN a new machine is purchased for the office it is often found that work can be provided for, say, five hours of the day, but that there is some difficulty in finding just the right job to make it a full hundred per cent effective.

Let us therefore take a look around an average, small mechanized office to see what could be done with the machines available and to see if their working time can be more fully utilised.

The most suitable starting point is the order department. Here the order is received in the morning, and a successful send-off at this point will generally save hours of work later on.

There are now certain factors which we must bring into our calculations. First there is the number of orders to be typed each day, secondly the number of copies which are required to enable the factory to dispatch the order, and thirdly the rate which the factory must get the orders so that they can be dispatched with speed.

Let us take a medium-size factory with four manufacturing departments: a suggested order set would be invoice, traveller's copy, ledger copy, four departmental requisitions and two copies for the dispatch department, one would be the advice note and the other a receipt of the goods by the customer.

Continuous Stationery Attachment Is Useful

A nine-part set such as this could be typed on an ordinary typewriter with a continuous stationery attachment if the number of orders does not warrant installation of a proper billing machine.

Where the latter type of machine has the advantage is that one roll of carbon paper is inserted on Monday morning and lasts for more than a week without being changed. It can therefore be understood that if the amount of work to be done is small, a typewriter with attachment is fully adequate, but if the output has to be large and speedy then there is no question about the advisability of the billing machine proper.

Whichever machine is used, however, continuous stationery made up in sets is a definite advantage.

In the making up of the order great care must be given to the allocation of copies four, five, six and seven, so that the department which requires the extra clarity for say, fractions, has copy number four.

To show how necessary it is to plan in advance, I will give an actual example of what happened at my present firm.

About two years ago it was decided to change over to continuous stationery, and we required ten copies of absolute clarity. The system we installed did

not quite come up to our expectations, so recently we changed over to another form of continuous stationery using a bank paper for the top copy and the other copies in the set made of vegetable parchment paper.

The result in clarity was amazing. In fact we now have an eleven-part set, but we found that as the machine operator drew the set through the machine the carbon started to tear.

This happened for some days until we discovered the cause. It was that the sets were perforated between each and, as pin-point method of perforation had been used, it caused a jagged ridge that tore the carbon.

Extra Jobs that Billing Machines Can Do

Next step in the mechanised office is to invoice the goods after they have been dispatched, and it will be found that machines which do the orders in the morning will have time later in the day to work this job in.

Other work which can be found for these billing machines is, when the firm has no addressing machine, to head-up six copies of customers' statements at a time, keeping five copies for subsequent months.

It is well known that there is much other useful work that can be done with these machines, but if you get what is outlined above, the machines will earn their keep.

Having invoiced the goods the ledger departments, having received a copy, are now ready to post this to the ledger. Every business has its own particular problems, and I suppose the one which must be given first attention

is whether or not narrative is required on the statement. After that it is not too difficult to decide on the actual machine.

Ledger-Posting Machines Can Also do Extra Work

There are many firms that would not have sufficient work for a ledger machine to post only sales invoices, so we must look around for additional work.

The ledger-posting machine is suitable for posting the purchase ledger, a material dissection, the control of which would agree with the purchase ledger control, wages payroll with the envelope having the amount posted on the outside at one operation, and lastly stock control.

When one really appreciates the number of uses to which a ledger-posting machine can be put it is surprising that, no matter how small the firm is, they still plod along with hand methods.

The next department we must look at is the cashier's. On the face of it, to have a receipt machine does not look like economy. This is quite true if it is to be used only for receipt writing. But by the mere flicking over of a key it will write in pin-point type, giving your cheque-writing not only speed but protection, at the same time giving a purchase-ledger, cash-book and an analysis of payments made.

Naturally the office will not be complete without a machine giving a printed tally roll and another purely of a calculating nature.

To put down all the uses that both these varying types of machines have would be difficult, but think how lost a



To Keep Your Communications going

Respirator Telephones for telephone office switchboard operators, power house engineers, look-out men and all persons who remain at their posts to provide essential communications. These telephones comprise a Civilian Duty respirator (as used by the A.R.P. services) fitted with special microphone, headband receiver and flexible cord with plug.

mechanised office would be without an adding machine giving printed totals for predetermining the ledger control, adding up the monthly sales on the visible record, the travellers' commission section for the listing of invoiced amounts for each traveller, and the dozen and one jobs that require a permanent record of check addition.

The calculator comes into its own in the checking of suppliers' and sales invoices, together with the extension of material requisitions, costing sheets, etc. It has to be a very small firm that cannot save on the installation of a machine of this nature.

Just before leaving there is the postal section, with an addressing machine equally suitable for sending out a circular to the customers in a local town as it is for covering the whole country. Weekly putting the names and addresses on the pay-cards and envelopes, and at the end of the month heading up sales ledger statements.

It is not possible to lay down any rules as to what can be done in an office by any one machine, but if there is only one idle hour on any machine, that idleness should certainly be investigated.

The War is No Excuse for these Typing Errors

WAR conditions are good excuses for lots of things, but not for untidiness or even for some sort of inefficiency or genuine lack of knowledge.

For example, with many inexpert typists in employment there is no need to allow letters to go out looking as incongruous as pictures hanging lopsided or badly spaced on a wall.

Many typists, even those who are otherwise fairly proficient, are careless in the setting out of letters and the placing of addresses on envelopes.

Coaching The Tyros

Back in the days of peace we interviewed a firm whose standard practice could well be followed by firms who now find that a little "coaching" in office methods is necessary.

This particular firm had a framed panel displayed in the office. In it were specimens, on the firm's own stationery, of how letters of varying lengths *should* be set out, and how the addresses on envelopes *should* be placed.

Typists' attention was directed to these specimens and they were instructed to follow the lay-outs as standard practice.

This put a stop to the exercise of individual whims in the matter of letter construction, and it vastly improved the general appearance of the firm's correspondence.

Even typists of war-time calibre can be induced to follow an instruction such as this.

A Few General Hints

There are a few additional things that can be usefully impressed on typists today. For example:—

1. Do NOT precede the names of companies with the term "Messrs." Messrs. Bill and Tom Smith is logical, but not Messrs B. and T. Smith & Co., Ltd., or, worse still, Messrs. National

Manufacturing Co., Ltd. That's silly.

2. When the text of a letter includes an indication that a folder, catalogue, plan or something is to be enclosed, make sure beforehand what size envelope to address. Nothing is more annoying to an executive signing his mail than to find a 3½ in. by 6 in. envelope addressed to take a 10 in. by 8 in. photograph. At the time she does the letters the typist may not know how big the enclosure will be. It is her job to find out. It wastes time, wastes stationery and frays tempers not to do so.

3. When in doubt with transcription, ask. Don't spend a long time guessing, only to guess wrong in the end. Altered letters don't look nice, and in single spaced typewriting there's not room to make clear alterations by hand.

Don't Fear to ASK

Many new girls and inexperienced girls are nervous about asking; they think it reflects adversely on their ability. A wrong word, especially in a long letter, reflects *more* adversely. Ask: the average executive is quite willing to help a typist who is obviously trying to do her job properly.

30 Queries

What Answers could you give about your own OFFICE?

SPECIALLY framed to assist executives to locate and eliminate the over-costly operations in office work the following questions have a special significance at the present time when "economy" must be the keynote of management policy:

1. Have you studied the causes of peak periods in your office?
2. Is your office organized to handle "priority" items without disturbing the normal flow of work?
3. Are you using a direct, or an indirect, method of handling accounting or obtaining statistics?
4. Are you piling up figures for a month-end peak load?
5. How many reports are produced but never used?
6. Are there periods of inactivity at certain desks during the day, due to a clogging of the work at other points in the office?
7. How much productive, and non-productive, time is required on each job?
8. Have you ever studied at one time all the forms in use in your office?
9. Do you take advantage of duplex machines to avoid relisting?
10. Can your adding machine operators use short-cuts to gain speed with less effort?
11. Do you save time by using tables of factors, such as decimal equivalents, interest factors, etc., in calculating work?
12. Does your present system require duplication of original records?
13. Are office employees obliged to find their work in different places or does the work flow to each desk in orderly process?
14. Are you using non-listing machines in places where the final result might be speeded with listing machines, or *vice versa*?
15. Is your form-writing as easy and fast as possible?
16. Have you considered the importance of correct seating?
17. Are all statement balances transferred at the beginning of the month?
18. Are your bookkeeping machine operators required to copy totals from dials, digit by digit?
19. Is each desk provided with the machine that is best suited to the job being done?
20. Are your cashiers able to balance cash quickly at the end of the day?
21. Can related records now being handled separately be prepared in one operation?
22. Do your internal and manufacturing records lend themselves to the advantage of decimalization?
23. Are your accounting and statistical records maintained in such a manner that reports for periods, or year-to-date, can be produced without analysis?
24. Does the handling of paper or forms take up too much of your machine operator's time?



25. Do "ciphers" play an important part in your figure work?
26. Are your adding machine operators obliged to subtract mentally?
27. Are your operators obliged to handle the same figures two or three times?
28. Is your office staff obliged to do manually, work that might be done electrically with much less effort?
29. Have you "coached" your employees on getting desired results with less effort?
30. Do you lose time in obtaining statistics as a separate operation?

The above are important questions. They are taken from a special booklet, *Ways to Save Time in an Office*, issued by a well known adding machine company. In this booklet each question is carefully examined and practical recommendations are given for the better organization of the various aspects of work.

As the compilers say: "The purpose of this booklet is to suggest individual spots where a desk-to-desk check might indicate that minutes—possibly hours—might be saved by a careful analysis of present routines and operations."

Readers of *BUSINESS* can obtain a free copy of this booklet. Enquiries addressed to the Editor will be passed to the quarter concerned.

More About Good Lighting

WITH the hours of darkness increased by the recent reversion to normal time, plus the still more urgent need for greater and more economic output from Factories and offices of all kinds, a new catalogue of lighting equipment comes at an appropriate moment.

This 72 page book describes and illustrates equipment designed to perform every possible lighting job that industry can need.

There are fittings to give a "light spread" of appropriate intensities over areas of every shape and size.

A useful section included is that devoted to fittings for discharge lighting. The high efficiency and low current consumption of discharge lamps is becoming more and more widely known. This system is therefore worth examining just now.

Black-out requirements do not detract from the need for efficient lighting inside factories and offices. This new catalogue, therefore, is as useful today as at any time. It is free to readers of *BUSINESS*. Address enquiries to the Editor, who will be pleased to refer them to the proper quarter.

Contracts and the War

SOME enquiries from small businesses suggest to us that the situation today in regard to contracts

between buyer and seller is not altogether clear.

War does *not* invalidate a contract, unless there is in the contract a clause specially stating that it does so. But,

and this is important, one party cannot enforce against another a contract that has clearly become impossible of fulfilment.

Mobile Stores Units Save Time, Work, Space

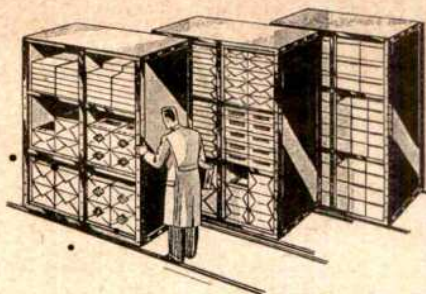
An easily adaptable system invented by

T. E. FOULKES, Manager, Stationery Dept.

London Headquarters of The Co-operative Wholesale Society Ltd.

BY introducing modern methods Mr. Foulkes has brought about what seems to be a revolutionary improvement in storage for retail and wholesale businesses. His system consists of steel units fitted with wheels to run on metals plugged into the floor, or, alternatively, moving on overhead rails.

In many systems, much floor space, which might otherwise be available for



The units run on rails. No matter how heavily packed, the lightest physical effort easily moves them.

stock, is wasted by gangways between every two facing rows of fixtures. This new system, which brings mobility into storage, eliminates the need for these alternating corridors, by disposing the shelves, racks, or bins in closely-spaced ranks up to six deep, with one gangway only in front.

The relative amount of space occupied, respectively, by gangways or cor-

ridors in the new and old systems is shown by the accompanying diagram, and the illustration shows the units in use in a wholesale stationery storeroom.

Each rank comprises any number of units, and one blank space is left in each rank equal to the width of one unit. By this means, any unit can be made to move in its own length, and the rank thus opened anywhere to give accessibility to the units behind it.

The units move easily with negligible effort (a row of eleven, closely-packed with stationery goods, can be pushed with one hand), and there is no risk of hands being crushed between the units as rubber buffers fixed to the sides prevent their coming into direct contact with each other, and ensure sufficient space between each unit for the insertion of a hand to push them apart for access to the row behind.

Various standard sizes are made with a baked enamel olive-green finish, but size and finish can be made to meet any requirements. The units can be fitted with adjustable shelves, as in the installation, or with bins, racks or compartments.

The makers are a well known London firm who have the sole rights for manufacture outside the Co-operative movement, and will be pleased to submit to readers of *BUSINESS* any further details of a "mobile" plan for their storage requirements. Address enquiries to the Editor.

1	2	3	4	5	6	7	8
GANGWAY							
9	10	11	12	13	14	15	
16	17	18	19	20	21	22	
GANGWAY							
23	24	25	26	27	28	29	30

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	
16	17	18	19	20	21	22	
GANGWAY							
23	24	25	26	27	28	29	
30	31	32	33	34	35	36	
37	38	39	40	41	42	43	44

Storage Space Increased by 47%

In the old method of fixed bins or racks, space had to be occupied by gangways that gave access to all bins. The new mobile system enables 44 instead of 30 bins of the same size to be accommodated in the same space.

Economical Heat . . . For Those Cold Spots

A DEQUATE heating is not always easy to provide in workshops and warehouses, particularly if (a) the buildings are old, and (b) there is a large expanse of glass or much traffic through the doors. As a result many owners of small factories are using types of heating apparatus that are low in first cost. The efficiency factor has been relegated to secondary importance because of the expense involved.

Now for the first time the law requires maintenance of specific temperatures. In consequence many workshops need radical revision of heating systems. Thus the main requirements are (a) maintenance of the legal temperatures; (b) economy in first and installation costs; (c) fool-proof operation with the minimum of attention, and (d) economy in working.

Coke is among the cheapest and handiest fuels for factory heating. Although its bulk is rather large in proportion to weight, there are heaters

available which take enough at one charge to burn for 10 to 15 hours on full consumption.

One successful type is the make illustrated here, of which three models are on the market. The approximate heating capacities of the three are 7,500, 10,000 and 15,000 cubic feet. A greater heat output can be obtained by increasing the rate of consumption or constructing larger heaters. The manufacturers find, however that this usually results in the creation of a small zone of unnecessary high temperatures without any great increase in the area effectively warmed.

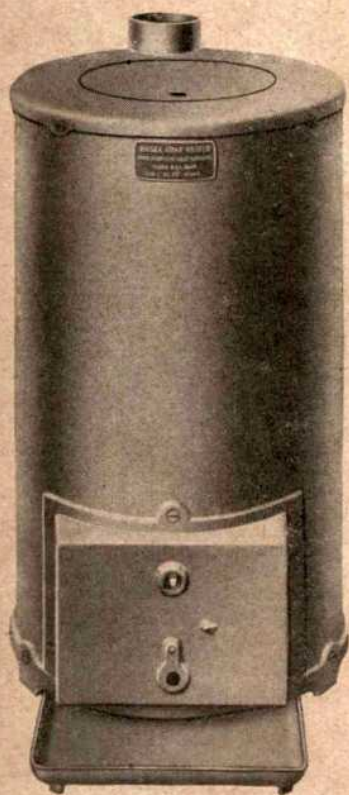
The rate of combustion of the heater is governed by the size of the air inlet. For overnight use a shutter is provided which, when dropped into position over the inlet port, cuts down the rate of burning to $\frac{1}{2}$ lb. per hour. This gives precise and fool-proof control.

In the old style "slow combustion" stoves such control could not be exercised. As a result there was dangerous overheating. This usually led to crumbling of firebrick lining, and the stove and flue pipe got dangerously hot. The fire insurance rate and the fuel bill rose. And only the workers in the immediate vicinity of the stove really had any benefit from it.

Overheating is prevented in the new coke heater by the provision of a locking device for the ashpit door. When the ashpit is cleared and the heater recharged with coke in the morning, the ashpit door is locked. It is kept locked until next morning. When the shop closes down for the night the heater is filled up, and the slow-burning shutter is dropped. That is all the attention needed. With the door locked the fuel consumption cannot exceed the designed limit.

Installation is simple. Heaters can be placed anywhere and need only connections to a flue outlet.

Fuel costs vary according to conditions and price of the coke used. In normal conditions and with coke at 35s. per ton, the cost is about halfpenny for 24 hours for 1,000 cubic feet.



Most workshops and factories have 'cold spots,' yet even to maintain the Factory Acts' statutory temperature few small firms can instal elaborate heating plant. This is where these new coke heaters come in. They give heat at a cost of a halfpenny per 24 hours per 1,000 cubic feet of space.

Seize Every Opportunity Offered by War-Time Markets

Here is one Example of a Firm's adaptability

A FRESH marketing impetus is being given by the war to a complete electric laundry system being produced by a well known firm of household machine manufacturers.

Many manufacturing and other concerns have a laundry problem. From factories, employees' overalls, etc. are sent to local laundries; hotels, hospitals, institutions, etc. send great quantities of "washing" to the laundries.

It is an established fact, however, that laundries are the very places that will be called upon to deal with the

bulk cleansing of contaminated clothing in the event of there being a gas attack by air.

In view of this possible curtailment of normal laundry services many firms, hotels, hospitals, etc. are installing this semi-commercial laundry system which completely handles the washing, drying and ironing of practically every sort of textile fabric—from grease-laden engineers' overalls to fine table linen.

By providing a quick, on-the-spot service, makers of this laundry equipment state that firms can reduce wear and tear and run on lower stocks, thus achieving considerable economy.

New Cleaning Cloths for Old

Useful Money-Saving Service for Machinists

I N the great majority of firms cleaning cloths for machinery form an item of expense. In some firms, such as engineering concerns, they constitute a very considerable item.

Ingenuity of a British firm has enabled this expense to be reduced considerably. A Salford, Lancs. firm runs a Cleaning Cloth Service whereby firms are supplied weekly with a supply of clean sponge cloths at an all-in cost of

about 15s. 9d. per cwt., as against foreign rags ordinarily costing about 25s. This economy in price is all the greater when it is considered that the firm's price includes regular collection of the dirty cloths and the supply of clean ones.

It is interesting to note how this firm, who were in cotton, started this business. Back in the cotton trade slump of 1922 the firm gave a thought to the

fact that almost all the machinery cleaning cloths used in such vast quantities in this country consisted of old clothing imported from Japan, the Balkans, and other places.

They thought they might break in on this business, so they produced better quality stuff, added the all-important factor of reliable collection and delivery service, charged a hotly competitive price—and won out.

The idea enabled them to increase their business five-fold.

Whatever Your Problems Prompt Assistance is Available

IN these days of high pressure and disorganisation every source of help is worth considering. BUSINESS is in touch with men who can advise you in every sphere of business activity, whether very small, just ordinary, or very large problems are involved. All you need do is to outline briefly your difficulty and send it to the Editor. You will then be put in touch with appropriate advisers.

Site Selection, Factory Design and Building An All-in Service . . .

THE ever increasing specialised needs of business have been well met by appropriate specialization in equipment and services provided.

No better example of this can be found than the provision, to the business man today, of a complete service that fits him with a factory for the manufacture of his products. That, in short, is the specialised service which Commercial Structures Ltd. provides.

In 1930, when there first appeared signs of a boom in industry, there was a movement towards the construction of new factories by business men anxious to participate in the return to prosperity. But, as was shown in a survey conducted by BUSINESS at the time, a factory does not just spring up anywhere at the whim of a few individuals any more than it is thrown up haphazard by the builders, at least, not if it is to be a success.

This, however, was not always realized by industrialists. Many have discovered too late the difficulties arising from inadequate labour supplies, from the high cost of essential services such as power and heat, from the inaccessibility of raw materials or

markets, and so on. Instances are not lacking where a hurried change of site, involving concomitant loss of money and valuable time, have had to be made.

It was about this time that Commercial Structures Ltd. singled out for specialized attention this matter of industrial site selection, factory design, construction and other related problems. They were, still are in fact, the only organization in this country thus to relieve busy executives of a problem of paramount importance which carries with it a host of allied technicalities that are essentially jobs for specialists.

More and more manufacturers now demand scientifically planned factories. Business men realise that new buildings accurately designed for their special purpose increase the speed and economy of output, are easier and cheaper to run, and have a greater earning power than their less rationally designed counterparts.

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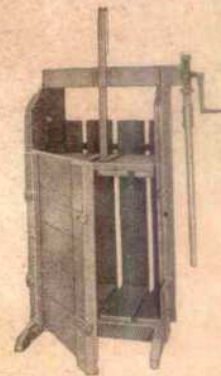
Baling your Waste Paper



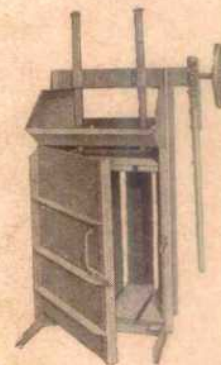
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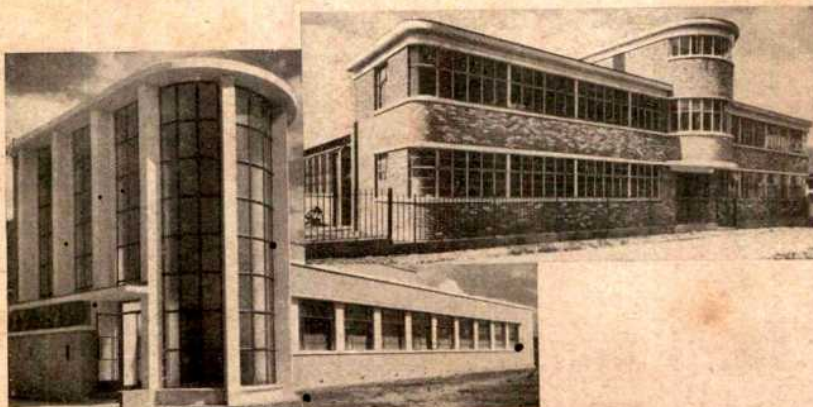
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careful site selection in the first place, and the often complicated procedure, legal and otherwise, inseparable from negotiation, the thousand and one worries connected with the building of a new factory, or moving from an old to a new one, are taken care of by Commercial Structures' service. Gathered under its roof for the purpose is a permanent staff of nearly a thousand and experts who specialise in those services it has hitherto been necessary to employ separately—engineers, surveyors, builders, lighting and heating experts, etc.

These Services Interlock But Don't Overlap

The co-ordinated activities of these specialists provide an all-in-one service for organized and planned factory construction that takes care of everything from start to finish, once a manufacturer has made his decision. After the latter's needs have been discussed and analysed surveyors find a suitable site. This is the first practical step. Just as the actual building is designed and planned long before it graces the landscape, so the reasons for its location in any particular area have been threshed out before the signal to go ahead is given.

Some of the reasons which most influence factory location are:—(a) Accessibility to raw materials; (b) Proximity of markets; (c) Suitability of labour; (d) Facilities for transport. All these problems are settled before a sod of earth is turned. In the London area "C.S." always have for disposal a number of selected sites that have been chosen with these factors in mind.

Assuming, therefore, that the question of site is settled, next on the scene are the engineers who, in co-operation with the client, evolve the most efficient lay-out.

The important point to remember here is that a single organization is responsible for the execution of the entire project. The sub-contractor has disappeared. Much time is thus saved by preventing the overlapping inseparable from the employment of individual units. The electrician's work is no longer inconvenienced by that of the plumber; the drainage engineer no longer interferes with the carpenter, and so on.

Standardization Reduces Production Costs

And the advantages of this method are further enhanced by a degree of standardization—another factor that enables time to be saved and costs to be cut. And throughout, the manufacturer knows exactly what the proposition is going to cost him because it is predetermined on an all-in-basis and there are, in ordinary circumstances, no exorbitant additions in the way of "revised estimates" as they are euphemistically called.

All this would seem to be a service comprehensive enough in its specialization, if such a seeming contradiction in terms may be allowed. But it goes still further. Reference has been made to a degree of standardization which is a part of the firm's policy. This is for the benefit of clients who do not wish to wait the three or four months that would normally be required for the erection and completion of a new factory. Immediate possession may be required. Manufacturers in this category are well catered for. "C.S." always holds available a number of factories partially constructed to a standard design, and they are so planned that they may be completed or adapted with great rapidity to suit individual needs. These are usually of the ground-floor or "daylight" type, and it is this standardization which brings building costs to a low level.

Other advantages of this type of building are, besides low cost:—(a) The ease with which they may be extended when necessary; (b) Maximum of natural light; (c) Supervision of operatives is simplified; (d) Good working conditions, therefore a contented staff; (e) Smooth flow of manufacturing stages; (f) Low overhead costs.

Good Factory Design Increases Output

Experience has shown that this form of specialization applied to factory construction, whether the ground-floor or multi-storey type, can result in an increase of output by as much as ten per cent.

These points of the "C.S." way of doing business, apart from their technical resources as practical specialists, are worth noting: (1) Factories are for sale or rent; (2) The land is freehold, and is sold as such; (3) Mortgage assistance for purchase can be arranged; (4) A factory built to your own design may be leased with the option of purchase; (5) "C.S." are willing to discuss any special proposals for factory construction anywhere in the country.



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When LIGHT-OBSCURATION Becomes CAMOUFLAGE

Camouflage Not Necessary Till Firms are Notified

FROM inquiries reaching us it seems there is still a good deal of uncertainty about the light-obscuration of roof windows and other glass areas, because most ordinary methods of obscuration leave the external surfaces of the glass acting as highly reflective surfaces.

In answer to firms who are in doubt on this point we quote *British Industries*, Organ of the F.B.I., which gives the following information:

"It is understood that certain factories, particularly those engaged on big Government contracts, have been advised that, in addition to taking ordinary measures of obscuration, they will have to coat the outside of their glass with a matt finish to prevent reflection. The question has been raised whether this will be a universal requirement, but it is understood that this aspect of the lighting problem is being regarded as a measure of camouflage, and only those factories receiving direct instructions from the Minister will be obliged to take this step, expenditure on which will rank for a 50 per cent. grant.

Obscuration May be Destroyed by Broken Glass

"It will be appreciated that a number of the methods of obscuration suggested by the Government and by private sources suffer from the fact that they would be rendered nugatory in the event of the glass being shattered. It has therefore been decided that certain firms engaged on national work which must proceed shall be required to provide shutters or panels fixed outside the glass.

"It is only, however where firms receive a special notice from the Ministry of Supply under its powers to require the protection of plant that the adoption of this method will be obligatory,

in which case expenditure on it will be financially assisted in accordance with the terms of the Ministry of Supply Act. The expenditure when incurred voluntarily will, of course, be chargeable against profits, as will expenditure on the more normal methods of obscuration. In this connection it is interesting to note that, regarding the scaffolding which might be necessary for operating shutters, the Board of Inland Revenue would be prepared to allow the cost of rental and erection being written off against profits, and, where the scaffolding was purchased outright, the cost would be similarly treated, provided that, if it were sold at a later date, the amount realized would be brought in as a trading receipt, or, if it ceased to be used for obscuration and was converted to a purpose of a capital nature, its value at the date of conversion would be treated as a revenue credit."

What You Must Pay Towards the War

THAT'S a complicated, as well as a not too pleasant problem. In *Key to War Taxes* (Taxation Publishing Co., Ltd., 3s. 6d.) just issued, it is all set out in easy sequence, with a thumb-index for quick reference.

E.P.T. and N.D.C. are fully dealt with, and there are many practical examples from which the business-man can draw parallels for his own business.

Suppliers'

Change of Address

THE address of Remington Typewriter Co., Ltd., Library Bureau Ltd., and Kardex is now Commonwealth House,

1-19 New Oxford Street, London, W.C.1. The Remington City showroom at 100 Gracechurch Street, E.C.3 is still maintained for the demonstration and sale of Remington Typewriters and Supplies.

Supply of Raw

Materials for Industry

Continued from Page 10

authority concerned and not to the Board of Trade. Questions concerning the export trade which involve issues beyond those affecting materials only should be referred to the Department of Overseas Trade, Great George Street, London, S.W.1.

Raw Materials

CONTROLLERS

In each case address enquiries to "The Controller":—

ALCOHOL, MOLASSES and SOLVENTS.

*Distillers Co., Ltd.,
Great Burgh, Epsom.*

ALUMINIUM

*Baven Hotel,
Castle Street, Shrewsbury.*

COTTON

*Cotton Board,
Midland Bank Building,
Spring Gardens, Manchester, 2.*

FLAX

*Washington Hotel,
City Road, Chester.*

(Scotland)

*Ministry of Supply,
Flax Control, Dundee.*

(N. Ireland)

*Northern Ireland Chamber of Commerce,
Belfast.*

HEMP

*Washington Hotel,
City Road, Chester.*

IRON and STEEL

*Steel House,
Tothill Street, S.W.1.*

JUTE

*1, Victoria Road,
Dundee.*

LEATHER

*United Tanners Federation,
8, St. Thomas Street, S.E.1.*

(Continues overleaf)

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"60=6 "SUPERFINE" Typewriter Ribbons.

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19, Berkeley Square, Bristol.

OTHER FERTILISERS

19, Berkeley Square, Bristol.

TIMBER

2-7, Elmdale Road, Bristol, 8.

WOOL

The Wool Control, Bradford.

Rebuilding A Business

Continued from Page 22

works where the load is regular, was made easy by my knowing beforehand what my annual turnover was likely to be. I agree. If I am able to spread the overheads, which in the case of printing are heavy, over a known amount of turnover in a given period, then any extra work I can conveniently squeeze in, especially during the slack periods of the month, is obviously very well worth having at competitive prices.

Nevertheless, by a little analysis of the problems our firm was able to reduce an annual loss to an annual profit, to pay a dividend, and to allocate a substantial sum to staff benevolent purposes.

Now I am busy finding ways to meet our war-time problems. Percival Marshall & Co., Ltd., one of our subsidiaries, has always had a reputation for popular workshop books, so it has now started to publish many new titles that are beginning to sell well to would-be mechanics. A good example of the benefits of reputation and goodwill!

These changing times will have one advantage for us. We shall not be allowed to slip back into the profitless groove from which we rudely shook ourselves four years ago.

To-day's Danger To Business

Continued from Page 8

A trade organization had of course been approached in connection with this scheme but it was not until after the scheme had been in operation a fortnight that notification was received that the organization in question had still to come to an agreement with certain trade unions upon revised hours of work where employers wished to work only during daylight, and suggestions were requested from employers who had anything to contribute. Information on the scheme already worked out, agreed to and in operation would, it is hoped, be sufficient for this

organization to complete its arrangements in time for next winter!

I may be accused of finding fault with organizations. I should like to make clear that the inefficiency, inconsistency and inadequacy of which I complain I consider to be fundamentally due to the weak attitude of the individual business man.

War appears to have left so many people perplexed and confused that they have altogether ceased to rely upon their intelligence and simply grope along blindly without any definite aim and not even aware that they need guidance.

The business man's job is not to lose perspective. All business problems, particularly those which have a social character such as employment, are usually only the measure of the ability of man to control economic forces.

There is hardly a problem of this nature which has not already been solved in some country or another. If men will only look at economic problems without political prejudice, if such be possible, a much clearer view might be obtained.

The Executive's Main Problem

The job of the business man is not to solve problems but to by-pass them, so to act that they do not arise. He should be concerned not about the conditions prevailing at the moment but rather the position, say, some months ahead. It is difficult to beat the market which is already the equilibrium of forces, but events can be anticipated.

The ability of a man to forecast the future, and by virtue of this foresight to be able to meet all problems which arise, is the measure of the capacity not of the manual labourer, the artisan or clerk, but of the executive, the business man. If he is not fit to perform this function then he is not occupying the right position.

The war is not finished, one might even say that it has not begun, and something must be done to rouse the average business man from apparent immunity to shock. History, if not personal experience, shows that in every political, social or industrial upheaval there is a tendency for the martinet or adventurer to get on top, and it is for the business man to take care that this does not happen.

Industry and commerce have had, during the past few weeks, to conform to an "economy" against which the intelligence rebels. There is need for enlightened approach to the present highly unsatisfactory state of affairs; there is need for co-operation among those who are willing to look facts in the face; there is need for immediate action, preferably through the channels of well-organized Federations or Associations, working under the direction of a practical economist or adviser. Unless determined action, which is simmering under the surface today, is brought into the open and organized into a solid, genuine protest the time will come when bureaucracy in its worst form will have us in its power.